1   IN THE UNITED STATES DISTRICT COURT
              FOR THE EASTERN DISTRICT OF TEXAS
2   MARSHALL DIVISION

3   CONTENTGUARD HOLDINGS, INC.)(Civil Docket No.
)(2:13-CV-1112-JRG
4   )(MARSHALL, TEXAS
    VS.   )(
5   )(
)(NOVEMBER 13, 2015
6   APPLE, INC.   )(8:15 a.m.

7   TRANSCRIPT OF JURY TRIAL

8   BEFORE THE HONORABLE RODNEY GILSTRAP

9   UNITED STATES DISTRICT COURT

10 APPEARANCES:

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    (Proceedings recorded by mechanical stenography, transcript
25 produced on CAT system.)

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 1                    P R O C E E D I N G S

 2              (Jury out.)

 3              COURT SECURITY OFFICER:  All rise.

 4              THE COURT:  Be seated, please.

 5              All right.  Is the Plaintiff prepared to read into

 6  the record the list of items from the pre-admitted exhibit

 7  list that were used during yesterday's portion of the trial?

 8              MS. ENGELMANN:  Yes, Your Honor.

 9              THE COURT:  Please proceed.

10              MS. ENGELMANN:  Holly Engelmann for Plaintiff,

11  ContentGuard.

12              The list of pre-admitted exhibits used during

13  yesterday's trial are as follows:  PX-1, 4, 6, 7, 8, 23.08,

14  26.02, 29.08, 103, 129, 145, 1015C, 1019C, 1030C, 1041,

15  1081C, 1091C, 1093C, 1180, 1190.01, AX-81, PX-1002, 1003,

16  1005, 1058, 1140, 1149, 1150, 1006, 1010C, 1021C, 1026C,

17  1027C, 1028C, 1046C, 1052C, 1060C, 1096C, 1138C, 1022C,

18  1032C, 1156, 1034C, 1059C, 1031C, 1043, and 1189.

19              Your Honor, the parties have agreed to use the C

20  designation for exhibits that we request that the Court

21  seal.

22              THE COURT:  All right.  Are there objections to

23  that rendition by the Plaintiff?

24              MR. BRYAN ANDERSON:  No, Your Honor, not that

25  weren't discussed yesterday and the Court ruled on.
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 1                THE COURT:  All right.  Do Defendants have a

 2    similar list to offer?

 3                MR. BRYAN ANDERSON:  We do, Your Honor.

 4                AX-8, AX-145, AX-4, AX-81, AX-26, AX-549, AX-131,

 5    AX-116, PX-23.01, PX-29.08, PX-129.

 6                THE COURT:  All right.  Is there objection from

 7    the Plaintiff?

 8                MS. ENGELMANN:  No, Your Honor.

 9                THE COURT:  All right.  Counsel, as I made clear

10    this morning in chambers, the Court views these exhibits as

11    pre-admitted.  They've been through a rigorous evaluation of

12    the Court in line with the Federal Rules of Evidence, and

13    the parties have been given ample opportunities to raise any

14    and all objections to the exhibits during that pre-admission

15    process.

16                Therefore, the Court believes that the usage,

17    which was employed yesterday, is adequate to establish

18    publication before the jury.  Obviously, the list of

19    pre-admitted exhibits contains many, many documents that

20    will never be used in the trial.

21                The publication process, so that they're noted in

22    the manner that we've just done, is the way to distinguish

23    those that were a part of the trial from those that weren't,

24    but the Court believes the publication requirement is met

25    and that the parties have both been given an ample
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 1   opportunity to raise all appropriate objections to the

 2   exhibits, and the Court's gatekeeping function has been

 3   properly discharged.

 4            Therefore, we will follow this mechanism through

 5   the remainder of the trial.

 6            All right.  Are there any other issues that need

 7   to be raised before we bring the jury in?

 8            MR. THOMAS:  Your Honor, with respect to

 9   Dr. Goodrich, who will be continuing his examination today,

10   I wanted to make sure, because I don't know, whether in

11   cross-examination, Defendants are intending to try to start

12   to ask Dr. Goodrich about the Windows or iTunes -- or iTunes

13   version of Windows or for Mac.

14            As Your Honor will remember, we filed a motion to

15   exclude Dr. Kelly from testifying about those particular --

16            THE COURT:  I'm aware, Counsel, and I granted that

17   motion.

18            MR. THOMAS:  Right.  And so I just wanted --

19   because we've -- we've tried to discuss this with opposing

20   counsel to get a representative product stipulation, and we

21   haven't been able to obtain that stipulation.

22            And it appears that the Defendants may be trying

23   to distinguish between software that runs the iTunes for Mac

24   and Windows versus the actual machines themselves, the

25   hardware.  And if they're intending to cross-examine
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1   Dr. Goodrich with respect to those machines at all, we think

2   that's improper and not in accordance with Your Honor's

3   ruling on the Daubert motion.

4   THE COURT: Well, are you telling me that the

5   Defendants refused to discuss the issue with you?

6   MR. THOMAS: When we asked them for a stipulation,

7   Your Honor, saying that they weren't going to be raising the

8   Windows version of these machines for any purpose and asked

9   them to stipulate that the iOS versions that we've been

10 talking about are representative, they refused to do that.

11 So that leads me to believe they think there's still some

12 open ground there.

13   THE COURT: Did you ask them for an explanation of

14 their refusal? Did the parties discuss this, or was there

15 simply, will you do this; no, we won't; and that was the end

16 of the discussion?

17   MR. THOMAS: We asked for a stipulation; they said

18 no, Your Honor.

19   THE COURT: Well, you know, I don't know how

20 you-all expect this trial to be completed if you won't

21 openly communicate with each other. That doesn't mean

22 you've got to agree. That doesn't mean you have to agree

23 with me, but we have to communicate.

24   And I'm not going to accept a recalcitrance from

25 either side when it comes to meeting and conferring and

 1   discussing issues that arise during the trial.   That's --

 2   that's not acceptable.

 3   Let me hear from -- let me hear from the Defendant

 4   on this issue.

 5   Mr. Pritikin, certainly, I'd like to know where

 6   you stand on this -- on this, although I do think it's a

 7   little unusual for Plaintiff's counsel to try and force you

 8   to disclose your cross-examination before you do it.

 9   MR. PRITIKIN: Sure.   Let me explain, Your Honor.

10   They did send us a proposed representative product

11   stipulation.   I don't believe that there was a telephonic

12   meet and confer.   There was a fair amount of email back and

13   forth.

14   So I think the positions were fleshed out, and

15   we've told them where we stand on it.   We would not

16   stipulate to a representative product.   I don't think we're

17   required to do that.   I think they have the burden of proof

18   in the case as to the products.

19   What the Court did with respect to the Daubert

20   motion on Dr. Kelly was to strike paragraphs that were the

21   subject of that motion.   There were numerous paragraphs in

22   Dr. Kelly's report relating to Windows and to Macs that were

23   not the subject of the motion.

24   They dealt with the physical part and physical

25   integrity, for example, not involving the software itself.

1   And those were neither the subject of a motion to strike nor

2   the subject of the Court's order.

3   Now, you know, having said that, we think they

4   have to prove it. We're not going to, in the course of the

5   case, agree or stipulate that anything is a representative

6   product. I don't think the Defendants would like to do

7   that.

8   As for what I'm going to do in cross-examining

9   Dr. Goodrich, I do not intend to cross-examine him on this

10 subject, Your Honor.

11   THE COURT: Well, I'll say this, Mr. Thomas: I

12 agree with Mr. Pritikin's recital that the Court's order

13 struck specific provisions and paragraphs in Dr. Kelly's

14 report that you, the Plaintiff, asked to be struck. And the

15 Court's order goes that far, but it doesn't go beyond those

16 paragraphs that were expressly struck.

17   MR. THOMAS: Yes, Your Honor.

18   THE COURT: All right. I have some trepidation in

19 asking this, but are there other issues we need to raise

20 before I bring in the jury?

21   MR. PRITIKIN: Nothing from us, Your Honor.

22   THE COURT: All right. Dr. Goodrich, do you want

23 to return to the witness stand, please?

24   THE WITNESS: Thank you, Your Honor.

25   THE COURT: You may go to the podium, Mr. Thomas.

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 1                    MR. THOMAS:  Thank you, Your Honor.

 2                    THE COURT:  Let's bring in the jury, please.

 3                    COURT SECURITY OFFICER:  All rise for the jury.

 4                    (Jury in.)

 5                    THE COURT:  Please be seated.

 6                    Welcome back, ladies and gentlemen of the jury.

 7                    We'll continue with the direct examination by the

 8        Plaintiff of Dr. Michael Goodrich.

 9                    Mr. Thompson, you may continue.

10                    MR. THOMAS:  Yes, Your Honor.

11               MICHAEL GOODRICH, Ph.D., PLAINTIFF'S WITNESS,

12                             PREVIOUSLY SWORN

13                      DIRECT EXAMINATION (CONTINUED)

14        BY MR. THOMAS:

15        Q    Good morning, Dr. Goodrich.

16        A    Good morning.

17        Q    When we left yesterday when we broke, we were on this

18        slide as part of your presentation.  If you could perhaps

19        briefly summarize where we were at when we finished

20        yesterday, and then I'll move on to the next topic.

21        A    So we had just concluded summarizing my findings and

22        conclusion with respect to these main common elements of the

23        Stefik patents and how they are based on the evidence they

24        saw exhibited in the Apple products.

25        Q    And, again, with respect to the indicating a manner of
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 1  use and any conditions of use, did you find that in any of

 2  the Apple products?

 3  A    Yes, sir.  I found those in the product.

 4  Q    And just briefly, what were those manner of uses and

 5  conditions of use?

 6  A    So I had shown the evidence in my conclusion based on

 7  that, that "kind" field together with the "explicit" and

 8  "ratings" conditions was one type of a usage rights with

 9  conditions, and another one was this "isRental" field

10  together with the rental conditions that go along with that.

11  Q    And how did you conclude that the usage rights in the

12  Apple system are treated as attached to the movies, the

13  books, or the TV shows?

14  A    So I had found basically four different ways that those

15  usage rights are treated as attached to the content,

16  including the URL for where to go to get the movie through

17  the Akamai content delivery network, the AdamID, which was

18  an identifier to identify the content, the decryption key

19  that is in the SINF that you would then need to decrypt the

20  content, and then finally this local address on the iPad

21  itself of where to go to find the content and looking that

22  up in the media library.

23  Q    Dr. Goodrich, did you also consider specifically how

24  books are sold through the iTunes system, the accused

25  infringing Apple system to its customers?
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 1   A      Yes, sir, I also considered books.

 2   Q      And do you have something you prepared that could

 3   explain to us what you concluded with respect to books?

 4   A      Yes, sir, I believe it's the next slide.

 5   Q      And if you could, just please explain to us what you

 6   uncovered, what you found when you looked at how books were

 7   sold by Apple through its iTunes Store on to iPads and the

 8   other accused devices in this case.

 9   A      So what I found with respect to books is that iBook

10   files at iTunes Store are DRM protected like movies.

11         In particular, there's a purchase response that has

12   usage rights that has a very similar format that comes down.

13   It includes that security information or SINF, SINF, and a

14   decryption key that is then stored with the book.

15         And then finally, there's the kind and explicit tags

16   that are checked to enforce usage rights and control

17   viewing.

18   Q      And what was your conclusion then with respect to the

19   sale of books over the iTunes system by Apple infringes the

20   claim of the Stefik patents in this case?

21   A      So I determined that books also infringes, and as

22   evidence, I cite to Dr. Smedley's source code report and the

23   other exhibits I show on this slide.

24   Q      And is that where you show them in the lower -- on the

25   lower end of it?  Those are the Apple documents that you
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 1  relied on?

 2  A     Yes, sir.

 3  Q     Okay.  Now, did you also look at music and how music is

 4  sold by Apple through its iTunes Store on to the Apple

 5  accused devices?

 6  A     Yes, sir, I did.

 7  Q     And what did you determine when you made that analysis?

 8  A     So if you go to the next slide, this summarizes one of

 9  my findings; in particular, that prior to April 2009, where

10  things actually changed, but before that, music files and

11  iTunes were DRM-protected like movies.

12        In particular, there was a purchase response that came

13  down with that same kind of format that had the usage

14  rights.  Inside of there, there was that security

15  information or SINF and a decryption key that then was

16  stored with the songs in this case and that there was also a

17  "kind" and "explicit" tags that were checked to enforce the

18  usage rights and control playing.

19  Q     So with respect to how Apple sold music files or music

20  tracks to its customers through the iTunes Store and on to

21  the Apple devices, before April of 2009, what was your

22  conclusion with respect to infringement?

23  A     My conclusion is that prior to April 2009,

24  DRM-protected music would also infringe.  And I cite to

25  Dr. Smedley's source code report and those exhibits that's
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 1   listed on the bottom of this slide.

 2   Q   And those exhibits are Apple documents; is that

 3   correct?

 4   A   Yes, sir, and the source code.

 5   Q   Now, did Apple change how it sold music through its

 6   iTunes Store after April of 2009?

 7   A   Yes, sir. I've -- I have a slide that talks about how

 8   things changed after that.

 9   Q   Okay. If you could, please just explain to us exactly

10   what it was that changed in the way that Apple sold music

11   after April 2009?

12   A   So after 2009, April 2009, Apple switched to DRM-free

13   music.

14   Q   And what does that mean, DRM-free?

15   A   That it's -- what they're trying to convey, in my

16   opinion, to the public is that this music is no longer being

17   controlled by digital rights management. And if you look at

18   how the -- the system functions, that is, indeed, the

19   outcome that occurs at the end.

20   Q   And could you walk us through exactly how that DRM-free

21   music that Apple started to sell after April of 2009, how

22   that is conveyed and provided to the customer?

23   A   Certainly.

24   So the -- the way that it works now under this DRM-free

25   system is that music is sent encrypted, so it's sent in that

 1 encrypted file, and then a decryption key is sent to the

 2 customer's device, but not in a SINF.

 3   It's -- it's sent in something called DP info message

 4 that then permanently decrypts the music, permanently

 5 deprotects it, so now it is no longer under DRM control and

 6 that now this unencrypted file can be played by other apps.

 7 It can be freely shared. It can be sent out to friends and

 8 family without any controls whatsoever after that.

 9 Q   Now, as part of your analysis that you did in this

10 case, did you consider whether there was any portion of

11 Apple's system, in the way it sold DRM-free music, that

12 infringed any of the claims of Dr. Stefik's patents?

13 A   Yes, sir. I did -- I did have such an analysis.

14 Q   Okay. And what was your conclusion with respect to

15 whether there was any portion of this process you just

16 described to us for DRM-free music that could infringe

17 Dr. Stefik's patents?

18 A   What I concluded with respect to this DRM-free music is

19 that it would only infringe with respect to that one step of

20 deprotecting or decrypting the music because it -- only that

21 part would be controlled by how any kind of usage rights

22 would be coming.

23 Q   Well, does the way in which Apple has designed this

24 DRM-free music -- and when it's used by customers, this

25 DRM-free music to playback, or actually, when the customer

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 1  plays the music, does that process, in your opinion,

 2  infringe any of the claims of Dr. Stefik's patents?

 3  A    No, sir.  Any of those times after the fact that it's

 4  been sent to their device and now deprotected, any of those

 5  other times when they're playing the music would not be

 6  infringing the Stefik patents.

 7  Q    And have you ever offered an opinion that this

 8  playback, this -- when the customer wants to try to play the

 9  DRM-free music, have you ever offered an opinion that that

10  process infringed any of Dr. Stefik's patents?

11  A    No.  I believe I've been consistent throughout all of

12  my reports and depositions that that playing process, after

13  it's been decrypted, is not infringing the Stefik patents.

14  Q    Okay.  Now, that process, before the playing process,

15  before the playback process, just the decrypting process,

16  just that alone, does that have any value for a customer

17  when they acquire or purchase a track -- a music track from

18  the iTunes Store?

19  A    I don't believe a customer is even aware of it

20  occurring.

21  Q    Okay.

22  A    It happens when the -- when the song comes, and it's

23  before it's ever played.  I don't see how that would be

24  of -- of value to a customer.

25  Q    And is it -- what's your understanding as to whether or
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 1   not ContentGuard in this case is alleging that any use of

 2   the DRM-free music that Apple sells is infringing?

 3   A    My understanding is that ContentGuard is not accusing

 4   DRM-free music of -- of infringing any of the patents.

 5   Q    Okay.  Now, Dr. Stefik, do you have -- I'm sorry.

 6   Dr. Goodrich.  I apologize.

 7        Dr. Goodrich, do you have a slide that you've created

 8   that can just summarize overall for us what you found when

 9   you looked for those main features that you talked to us

10   about early in the case?

11   A    Yes, sir.  I have a summary slide getting back to those

12   three main points that were common to all of the Stefik

13   patents, and in particular, that we have to have trusted

14   devices.  That's described in the Stefik patents.

15        And I illustrated with that figure, likewise, I found

16   that in the Apple devices.

17        Likewise, there needs to been enforcement of usage

18   rights on the device to allow for anytime, anywhere

19   playback.  I also found that in the Apple system.

20        And then finally, these usage rights have to be

21   attached or treated as attached to the content, and I found,

22   indeed, in the Apple system, usage rights are treated as

23   attached to the content.

24   Q    Were you here when, in the preliminary instructions,

25   the Judge instructed the jury about the claims of the patent
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 1  and the ones that define exactly what the rights are that

 2  the patent owner owned, what intellectual property he owns?

 3  A    Yes, sir, I was here for that.

 4  Q    Now, have you looked at the claims that are asserted in

 5  this case from Dr. Stefik's patents and have you actually

 6  compared those claims to the accused Apple system?

 7  A    Yes, sir, I've done this.

 8  Q    And have you prepared something that you could walk us

 9  through what your conclusions were when you looked at the

10  actual claims that are being asserted from each of these

11  patents and compared it to the accused Apple devices and the

12  Apple system?

13  A    Yes, sir.

14       If we go to the next slide, we see that we have

15  something that's commonly referred to as a claim chart that

16  I've prepared.

17  Q    And so you recall earlier you had described for us what

18  each of the four patents that Dr. Stefik has that defined

19  each of -- and -- and claimed a different feature of

20  Dr. Stefik's system.

21       What claim is this, this '956 Claim 7?  What is that

22  directed to?

23  A    So this is the '956 Claim 7, which is directed to a

24  recipient apparatus, the customer device, for rendering

25  digital content in accordance with usage rights information,
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 1   the recipient apparatus comprising, which was that word that

 2   the Court has instructed the jury about at the beginning,

 3   and then it gives us a number of elements after that.

 4   Q    So what did you conclude with respect to whether or not

 5   this first requirement of Claim 7 that you just read is

 6   satisfied in the accused Apple devices?

 7   A    I found that, indeed, this is a rendering device that

 8   renders in accordance with usage rights.

 9   Q    Okay.  The next requirement of this Claim 7 says that

10   the device has to have one or more processors.  What did you

11   conclude with respect to whether or not the accused Apple

12   devices include one or more processors?

13   A    I -- I concluded that they do, indeed, include one or

14   more processors, and that's that --

15   Q    And did you -- did you show us where you found those

16   processors earlier in your testimony?

17   A    Yeah.  It was that -- that CPU that we had identified

18   in the motherboard.

19   Q    And the next requirement of this Claim 7 is one or more

20   memories operatively coupled to at least one or more of

21   the -- one of the one or more processors and having

22   instructions stored thereon that, when executed by at least

23   one of the one or more processors, caused the processors to

24   do the following things.

25        Did you look to see whether or not such memories
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 1  operatively coupled to the processors exist in the Apple

 2  devices?

 3  A    Yes, sir.

 4      And I showed this identifying of the chips where these

 5  memories would be found and then where the instructions for

 6  the software would then be stored.

 7  Q    Okay.  And did you -- what did you -- what did you

 8  conclude when you looked to see whether or not those

 9  software instructions enable the receipt of the digital

10  content by the recipient apparatus from at least one sending

11  computing device only if the recipient apparatus has been

12  determined to be trusted to receive the digital content?

13  A    I -- I determined that this is also satisfied because

14  the -- the consumer sends up their authentication

15  information and -- and purchase, authentication with their

16  user name and password.

17      And then after they've been determined to be trusted,

18  they then receive the content.

19  Q    Okay.  And the next requirement of this claim says that

20  the device has to receive a request to render the digital

21  content.  Does that happen in the accused Apple devices?

22  A    Yes, sir, there's a request to play.

23  Q    And the next requirement says:  Determine, based on the

24  usage rights information, whether the digital content may be

25  rendered by the recipient apparatus.
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 1        What did you determine when you looked to see whether
 2   that instruction was included on the software for the
 3   accused device?
 4   A     Yes, sir.  I found this as well, because there's that
 5   step of checking those usage rights before the customer is
 6   allowed to then play.
 7   Q     And then the last step says:  Construction says that it
 8   will render the digital content only if it's determined that
 9   the content may be rendered by the recipient apparatus.
10        What did you conclude when you look to see whether
11   requirement of this Claim 7 is present in the accused Apple
12   devices?
13   A     I found that was also present.  And as was illustrated
14   in that demonstration that I did, it only would play if the
15   conditions are satisfied.  And that case it was for a
16   rental, allowing the rendering to occur, the playing to
17   occur.
18   Q     Now, with respect to the '007 patent and the claim
19   there, remind us, please, what is it that that claim -- what
20   feature of Dr. Stefik's inventions and systems does the
21   Claim 6 of the '007 patent cover?
22   A     So the '006 -- or the '007, Claim 6, is covering the
23   store type of a server, and so it's identifying a sending
24   apparatus for distributing digital content to at least one
25   recipient computing device to be rendered by the at least
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 1   one recipient computing device in accordance with usage

 2   rights information.

 3       And then it talks about what that comprises.  And I

 4   found that element in the Apple system.

 5   Q    And where did you find that Apple element in the Apple

 6   system?

 7   A    With respect to the iTunes Store servers that I

 8   identified.

 9   Q    And then this claim says that those servers, those

10   iTunes Store servers has to have one or more processors.

11   Did you determine whether or not the computers that are

12   running the Apple Store servers have one or more processors?

13   A    Yes, sir.  I found some documents that identified the

14   processors in those computers.

15   Q    And then it says that those computers have to have one

16   or more memories operatively coupled to at least one of the

17   one or more processors and having instructions stored

18   thereon that when executed cause at least one or more --

19   cause the processors to perform the steps that are going to

20   find.

21       Did you find such memories in the computers that are

22   running on the iTunes Store servers?

23   A    Yes, sir.  I found documents that discussed also their

24   memories, and then we also had -- I also had the source code

25   report from Dr. Smedley that talked about the software that
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 1  would be executing on those memories that then would be

 2  performing these next steps.

 3  Q    And did that software that was executing on the iTunes

 4  Store computers determine if the at least one recipient

 5  computing device is trusted to receive the digital content

 6  as required by this next portion of Claim 6?

 7  A    Yes, sir.  The -- the store software also would be

 8  checking that the customer is a legitimate customer before

 9  sending the content.

10  Q    And the next requirement of Claim 6 says that the store

11  computers send the digital content by the sending apparatus

12  to the store computers to the at least one recipient

13  computing device only if the at least one recipient

14  computing has been determined to be trusted to receive the

15  digital --

16            THE COURT:  Mr. Thomas, you're going to have to

17  slow down if you're going to read like a machine gun.

18            MR. THOMAS:  All right.

19            THE COURT:  You're just going to have to slow

20  down.

21            MR. THOMAS:  I will, Your Honor.  I apologize,

22  sir.

23            THE COURT:  Okay.

24  Q    (By Mr. Thomas) Rather than reading again, sir, you've

25  looked at this element of the claim.  Could you explain to
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 1   us what you determined when you -- when you looked to see

 2   whether this requirement of Claim 6 is present in the

 3   accused Apple system?

 4   A     I determined that this also is -- is present in the

 5   accused Apple system.  Because after the customer is

 6   determined to be trusted with that authentication

 7   information, it's after that point that they then receive

 8   that purchase response message that then has in it that URL

 9   of where they can go then to have that content sent to them

10   through the Akamai content delivery network where that

11   content came from originally the iTunes Store.

12   Q     And the next requirement of Claim 6 of the '007 patent

13   says that the instructions on the store servers or computers

14   have to send usage rights information indicating how the

15   digital content may be rendered by the at least one

16   recipient computing device, the usage rights information

17   being enforceable by the at least one recipient computing

18   device.

19        I probably have a typo there on the "on," and I left

20   out an E, but did you determine whether or not the

21   instructions that are running on the Apple Store servers

22   perform that requirement of Claim 6?

23   A     Yes, sir.  I determined that this is also present in

24   that purchase response message that comes down and then is

25   enforced on the device.
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 1   Q      With respect to the '859 patent, Claim 1, what feature

 2   of Dr. Stefik's system does the claim in this patent cover

 3   and is directed to?

 4   A      So this is directed back to the customer device again

 5   and that it's identifying a rendering system adapted for use

 6   in a distributed system where there's multiple computers for

 7   managing the use of content, said rendering system being

 8   operative to render content in accordance with usage rights

 9   associated with the content.  And it describes whether

10   the -- the various things that are comprised in this.

11   Q      And do the accused Apple devices in this case meet that

12   requirement of Claim 1 of the '859 patent?

13   A      Yes, sir, they do.

14   Q      And then the next requirement of this claim says:  A

15   rendering device configured to render content.

16          Is that present in the accused devices in this case?

17   A      Yes, sir.  As I showed in the demonstration, they do

18   indeed render the content.

19   Q      And the next claim element for Claim 1 of the '859

20   patent says:  A distributed repository coupled to said

21   rendering device and including a requester mode of operation

22   and a server mode of operation.

23          What did you determine when you looked to see if that

24   requirement of the claim is met in the accused Apple

25   devices?
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1   A   So I found that this element is also met with respect

2   to the software and then the hardware when it's running that

3   software with respect to the videos application or the books

4   application.

5   And then it's coupled to the rendering device, and it

6   includes a requester mode that allows the users to request

7   to play and a server mode on the device itself that then

8   would be enforcing usage rights with respect to that.

9   Q   And the next requirement of this claim is: Wherein the

10   server mode of operation is operative to enforce usage

11   rights associated with the content and permit the rendering

12   device to render the content in accordance with a manner of

13   use specified by the usage rights.

14   What did you conclude when you looked to see whether

15   that requirement of the claim was present in the accused

16   Apple devices?

17   A   So I determined that this also was satisfied because

18   when the user makes that request bringing up, say, the

19   videos application, they then are seeing those choices of

20   watch a played -- purchased movie, watch the rental movie.

21   And then they would hit as the second step of that

22   request that play triangle, and that that request to render

23   is in accordance with the manner of use specified in those

24   usage rights, say in the "kind" field and "isRental," saying

25   they can -- they can play a rental movie or play a purchased

 1 movie.

 2   These kind of things would be specified in those usage

 3 rights matching up with the request; hence, this is also

 4 satisfied.

 5 Q   And then the next requirement of this Claim 1 of the

 6 '859 patent says that the requester mode of operation is

 7 operative to request access to content from another

 8 distributed repository.

 9   What did you conclude when you looked to see if that

10 requirement of this Claim 1 is present in the accused Apple

11 devices?

12 A   This type of a requester mode is also satisfied,

13 because the devices have this ability to request content

14 that is on the store server originally.

15 Q   And the last requirement of this Claim 1 of the '859

16 patent says that the distributed repository is operative to

17 render a request to render the content -- I'm sorry -- to

18 receive a request to render the content and permit the

19 content to be rendered only if a manner of use specified in

20 the request corresponds to a manner of use specified in the

21 usage rights.

22   What did you determine when you looked to see whether

23 that requirement of this Claim 1 was met in the accused

24 Apple system and devices?

25 A   I did determine that this also was satisfied because

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 1   the user can only play content that they're allowed to play,

 2   that's presented to them as satisfying the usage rights, and

 3   then that request to play is corresponding to the

 4   specification, that they have a right to play a movie or

 5   play a rental movie, these kinds of things.

 6   Q    And then the last claim, I believe, of the last of the

 7   four Dr. Stefik patents that are in this case is the '072

 8   Claim 1.  What does this claim -- what feature of

 9   Dr. Stefik's system -- his invention does this claim

10   correspond to?

11   A    So this is a method claim, so now what -- what is going

12   to follow next is a number of different steps that would

13   occur in order to perform this method.  And I found that

14   this method is being performed by the videos application on

15   the devices.

16   Q    And who actually initiates this method to be performed

17   on the Apple devices?

18   A    This would be anyone who's -- who's using the device

19   itself.

20   Q    And the first portion of this claim, first requirement

21   says:  A method for securely rendering digital content.  Did

22   you find that in the accused Apple system?

23   A    Yes, sir.  I found it in that videos application

24   software.

25   Q    And the next requirement says:  Retrieving by a
```

 1   document platform a digital document and at least one usage

 2   right associated with a digital document from a document

 3   repository, at least one usage right specifying a manner of

 4   use indicating the manner in which the digital document can

 5   be rendered.

 6   What did you conclude when you looked to see if that

 7   requirement of this Claim 1 is present in the Apple devices?

 8   A   So there's a lot going on here, but what I found is

 9   that this document platform is the repository of the

10   customer device and that it -- it retrieves from the iTunes

11   Store usage rights information that comes down in that

12   purchase response message and the digital document.

13   This is digital document in the broad sense of the

14   term. It could be a movie file, a book file where -- then

15   that file comes originally from the iTunes Stores and is

16   delivered through the Akamai content delivery network to be

17   retrieved by the device in the end.

18   Q   I believe you mentioned something there in that answer.

19   You said: Digital document in the general sense. Do you

20   recall that?

21   A   Yes, sir.

22   Q   So in the context of Dr. Stefik's invention and in the

23   context of your expertise, computer science, does a digital

24   document only refer to something like a book that's put in

25   digital form?

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 1   A      No, sir.  It's -- it's using this term "digital
 2   document" in a technical sense of a file that's -- that's in
 3   digital format that then would be something you could view
 4   or play, like a movie file or a book file or even a music
 5   file.
 6   Q      And so the next requirement of this claim was storing
 7   or is storing the digital document and the at least one
 8   usage right in separate files in the document platform.
 9   What did you determine when you looked to see if that was
10   being performed in the accused Apple devices?
11   A      So I determined that this is also satisfied because
12   that usage rights that came down in that purchase response
13   message are then split up, as I identified, and -- and
14   stored in the media library, as well as also being stored
15   with the content file, which is separate from the media
16   library.
17         So this is saying you have to have usage rights and the
18   content file stored in separate files, and that is satisfied
19   in the system.
20   Q      And the next requirement of this claim says:
21   Determining by the document platform whether the digital
22   document may be rendered based on the at least one usage
23   right.
24         Is that happening in the accused Apple devices?
25   A      Yes, sir.  It checks those conditions and those
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 1   indications of the manner of use before it does any

 2   rendering.

 3   Q   And the last requirement of this claim is: If the at

 4   least one usage right allows the digital document to be

 5   rendered on the document platform, rendering the digital

 6   document in accordance therewith.

 7   So is that requirement present and met in the accused

 8   Apple devices?

 9   A   Yes, sir. That -- that element is also met because you

10   can only play the content if it's in accordance with the

11   usage rights.

12   Q   Now, Dr. Goodrich, in addition to what you've just

13   identified here as your conclusions with respect to whether

14   there's infringement of these claims, did you look to see

15   whether or not there is something that is called indirect

16   infringement occurring in this case by anybody?

17   A   Yes, sir. I have a slide on that.

18   Q   Okay. And so if you could, just identify for us what

19   indirect infringement means and how it's contrasted with

20   direct infringement.

21   A   So my understanding of how indirect infringement works,

22   I got from the lawyers working with me, who informed me that

23   whoever actively induces infringement of a patent shall be

24   liable as an infringer -- and this comes right out of the --

25   the law. And then based on that, I then did analysis to

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 1   determine if there's indirect infringement by Apple.

 2   Q    Okay.  And what was your conclusion with respect to

 3   whether or not Apple actively induces infringement of any of

 4   these patents by somebody else?

 5   A    So what I determined is that Apple pre-installs the

 6   iTunes Apps on the accused Apple devices and places icons

 7   for these apps prominently.

 8        In addition, Apple also provides advertisements, user

 9   guides, and other documentation supporting and encouraging

10   the use of the accused products to render DRM-protected

11   videos, books, and music.

12        And I cite to some of these documents which are

13   included in the Plaintiff's exhibit here at the bottom, as

14   well as the deposition testimony of Mr. Farrugia.

15   Q    And what was your conclusion with respect to both

16   indirect infringement and direct infringement overall, as a

17   summary, based on your analysis and what you've described to

18   us yesterday and today?

19   A    So if we go to the next slide, we see the summary of --

20   of all of my conclusions.

21   Q    Okay.  And what was your first conclusion there?

22   A    So my first conclusion is that Apple iTunes videos,

23   books, and pre-April 2009 music directly infringe every

24   element of '956, Claim 7; '007, Claim 6; '859, Claim 1; and

25   '007, Claim 1.
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 1   Q    Okay.  And what about with respect to indirect

 2   infringement?  What was your conclusion and what patents did

 3   you decide that -- that theory of -- of infringement applied

 4   to?

 5   A    So what I concluded with respect to indirect

 6   infringement is that if Apple had knowledge or was willfully

 7   blind that its acts constitute infringement, then Apple

 8   indirectly infringes '956, Claim 7; '859, Claim 1; and '072,

 9   Claim 1 by inducing and contributing to infringement.

10        And in this case, it's Apple's customers and end users

11   of the Apple iTunes Apps that directly infringe.

12   Q    Okay.  And what about with respect to the remaining

13   patents and claims in the United States?  How did you

14   conclude -- what did you conclude with respect to direct

15   infringement there?

16   A    So another conclusion I had is that Apple directly

17   infringes '956, Claim 7; '859, Claim 1; '072, Claim 1 by

18   making, using, and selling in the United States or importing

19   into the United States devices on which the Apple iTunes

20   Apps are pre-installed.

21   Q    Now, these iTunes Apps, if you could just make sure

22   that we understand, what is it you're referring to when you

23   call out an iTunes App?

24   A    I'm referring to the software that performs the

25   functions of iTunes software on devices that would be
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 1 playing movies, playing music, and viewing books on any of

 2 these accused devices.

 3 Q   And is it the iTunes -- is it the software that

 4 actually enforces the digital rights management protection

 5 on those devices?

 6 A   Yes, sir. That's included as well.

 7 Q   And what did you conclude with respect to Apple's

 8 operation of the iTunes Store?

 9 A   So I determined that Apple directly infringes '007,

10 Claim 6, by making and using in the United States the iTunes

11 Store.

12 Q   And, again, the '007, Claim 6, what was that directed

13 to as the feature that it was focusing on in Dr. Stefik's

14 inventions?

15 A   It's focusing on that store side of the repository

16 system as opposed to the customer device.

17 Q   Thank you, Dr. Goodrich.

18   MR. THOMAS: I have no further questions. Your

19 Honor, I pass the witness.

20   THE COURT: Cross-examination by the Defendant.

21   MR. PRITIKIN: Your Honor, may we approach? We

22 have copies of the depositions --

23   THE COURT: You may.

24   MR. PRITIKIN: -- and the like. Ms. Scola will

25 present those.

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 1                  THE WITNESS:  Thank you.

 2                  (Pause in proceedings.)

 3                  THE COURT:  All right.  Mr. Pritikin, whenever

 4    you're ready.

 5                  MR. PRITIKIN:  All right.  Thank you, Your Honor.

 6                           CROSS-EXAMINATION

 7    BY MR. PRITIKIN:

 8    Q     Good morning, Dr. Goodrich.

 9    A     Good morning.

10    Q     Now, you're technically employed by ContentGuard's

11    lawyers at the McKool Smith Law Firm for your work on this

12    case; is that correct?

13    A     Yes, sir.

14    Q     And you're being paid at the rate of $500 an hour for

15    your work?

16    A     That is correct.

17    Q     And over the last five years, can you tell the jury how

18    much money you've been paid in total by the McKool Smith Law

19    Firm?

20    A     I've been paid over the five -- last five years

21    approximately $600,000.

22    Q     Now, you submitted an expert report in this case back

23    in May.  Do you recall that?

24    A     Yes, sir.

25    Q     And that contained the opinions that you had reached in
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 1  the case?

 2  A    That's correct, sir.

 3  Q    And it's fair to say you tried to be accurate and to

 4  avoid mistakes in that report?

 5  A    I did to the best of my ability, yes, sir.

 6  Q    You were present in the courtroom during Mr. Baxter's

 7  opening statement yesterday, correct?

 8  A    Yes, sir.

 9  Q    And do you recall Mr. Baxter saying that Apple shifted

10  over to DRM-free music a number of years ago?

11  A    That's correct, sir.  Yes, I heard that.

12  Q    And that when Apple did that, it began to use the

13  secure container approach for the DRM-free music.  Do you

14  remember Mr. Baxter saying that?

15  A    I do, yes, sir.

16  Q    And that's why Stefik's trusted system patents don't

17  cover the DRM-free music, because it's the secure container,

18  as Mr. Baxter said, right?

19  A    Could you say that question again, please?

20  Q    Sure.

21      The Stefik patents don't cover the DRM-free music,

22  because that uses the secure container, right?

23  A    So as I mentioned in my direct testimony, I did have an

24  opinion that the DRM-free music infringed but only for that

25  step of the deprotecting, the decrypting part.  It would not
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 1   infringe for the playing part.

 2   So to the degree that DRM-free music is implementing

 3   the secure container, it would not infringe for that playing

 4   part of the music or movies or books.

 5   Q   Dr. Goodrich, you don't dispute that the music, since

 6   2009, has been DRM-free, right?

 7   A   I -- I am not disputing that.

 8   Q   And the Stefik patents are for DRM, right?

 9   A   Yes, sir.

10   Q   Now, in your expert report, you said that the DRM-free

11   music that is sold by Apple infringes the Stefik patents,

12   didn't you, sir?

13   A   Yes, sir, for that step of deprotecting the content.

14   Q   Well, let's take a look at what you actually said in

15   the report.

16   MR. PRITIKIN: Could we turn the ELMO on?

17   Q   (By Mr. Pritikin) And do you recognize this as

18   Appendix C to the infringement analysis that you did, sir?

19   A   Yes, sir.

20   Q   And if we turn over to Page 90 of that -- I'm having a

21   little difficulty here. Bear with me, please.

22   All right. And I'm looking at Paragraph 202, and I've

23   highlighted the sentence which you included in your report,

24   which is: Additionally, for the reasons described in my

25   report, Apple's alleged DRM-free music files are, in fact,

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 1  not free of DRM protection and still infringe the asserted

 2  patents.

 3       That's what you included in Appendix C, sir.

 4  A    Yes, sir.

 5  Q    And you testified under oath, did you not, that you

 6  were accusing all of the music sold by Apple that was

 7  advertised as DRM-free as infringing?

 8  A    I -- are you asking now about my deposition?

 9  Q    Yes, sir.  Do you recall giving testimony?

10  A    Yes, sir.

11       So in my deposition, as today, I am consistently

12  saying, in my opinion, that Apple's DRM-free music infringes

13  the Stefik patents in that deprotection step.  And what I'm

14  referring to here is that paragraph earlier in my report

15  where I provide that analysis.

16  Q    You testified, did you not, sir, that Apple's DRM-free

17  music causes infringement of the Stefik patents.  You gave

18  that testimony, didn't you?

19  A    Yes, sir.

20  Q    So the way that you read the Stefik patents, they can

21  cover everything in the whole world.  They can cover the

22  trusted system.  They can cover the secure container.  They

23  can cover DRM.  They can cover DRM-free.

24       That's the way you read these patents, isn't it, sir?

25  A    No, sir, that's not.  And I can explain, if you'd like.
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 1   Q     And the reason that you're reading these patents so

 2   broadly is that you can't make out an infringement case

 3   against Apple unless you do that.  Isn't that the truth,

 4   sir?

 5   A     No, sir.  And I can explain that as well.

 6   Q     Now, when you prepared the infringement report in this

 7   case, you set forth all of your opinions on infringement,

 8   correct?

 9   A     Yes, sir.

10   Q     And, now, you didn't rely on your own analysis of

11   Apple's source code to understand how Apple's products work,

12   did you?

13   A     No.  I relied on the source code report of Dr. Smedley.

14   Q     And in the course of this case, Apple made millions and

15   millions of lines of source code available for you?

16   A     I believe that's correct.

17   Q     You spent one day looking at the source code, correct?

18   A     Yes, sir.

19   Q     And the purpose of that one-day visit was just to

20   confirm the processes and procedures that Dr. Smedley used,

21   right?

22   A     That is correct.

23   Q     Dr. Smedley, who's going to testify, isn't offering any

24   opinions on whether Apple infringes, is he?

25   A     No, sir, he's not.
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 1   Q      So it is true that the only expert for ContentGuard who
 2   actually reviewed the Apple source code in detail is not
 3   telling the jury that Apple infringes, correct?
 4   A      He is not providing an opinion about infringement.
 5   Q      In the course of preparing your report, you didn't test
 6   a single iPhone, did you?
 7   A      Beyond my own use of iPhones and iPads through the
 8   years, I did not do any additional testing beyond that.
 9   Q      And you did a demonstration of the iPad yesterday for
10   the jury, but you didn't test any iPads either in the course
11   of preparing your report, did you?
12   A      Again, beyond my own use of iPads over the years, I did
13   not do any additional testing.
14   Q      Now, you know that ContentGuard hired Dr. Stefik as a
15   consultant almost 10 years ago, right?
16   A      I am aware of that, yes, sir.
17   Q      And it's also true that you prepared your reports in
18   this case, and you reached all of the opinions in this case
19   without ever talking to Dr. Stefik, right?
20   A      Yes, sir, that's correct.
21   Q      Nor did you speak with any of the other inventors who
22   were serving as paid consultants to ContentGuard, did you?
23   A      No, sir.
24   Q      Now, in one of your reports, I think you described
25   Dr. Stefik's work as groundbreaking and fundamentally
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 1   changing the landscape for distribution of digital content.

 2         Do you remember something to that effect?

 3   A     I recall something along those lines, yes, sir.

 4   Q     And you consider yourself to be an expert in digital

 5   rights management, right, sir?

 6   A     That's correct.

 7   Q     In fact, you've listed your publications related to

 8   digital rights management going back to 1990 in your report,

 9   right?

10   A     Yes, that's right.

11   Q     So it would be fair to say that you've had some

12   personal involvement in DRM since 1990?

13   A     That's correct, sir.

14   Q     But you had never heard of ContentGuard until they

15   hired you and started paying you in 2012, correct?

16   A     That is correct, sir.

17   Q     Nor had you ever heard of any ContentGuard's patents

18   prior to 2012?

19   A     That is also correct.

20   Q     Now, you understand that ContentGuard has called

21   Dr. Stefik the Father of DRM.  You've heard that phrase

22   used?

23   A     Yes, sir.

24   Q     But it's fair to say that even though you had been

25   involved in DRM for over 20 years, you had never heard of
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 1   the Stefik patents that ContentGuard is asserting in this

 2   litigation?

 3   A     That is correct.

 4   Q     But now that you're being paid by ContentGuard, you

 5   believe that the Stefik patents are groundbreaking, even

 6   though you had never heard of those patents before?

 7   A     Certainly, that's correct.

 8   Q     You're not saying in this case that Apple actually

 9   copied anything from ContentGuard?

10   A     I'm not asserting, based on the evidence that I saw,

11   that there was copying that occurred.

12   Q     And you understand that repositories and usage rights

13   that are attached or treated as attached are the -- the key

14   requirements of all four of the Stefik patents?

15   A     Yes, sir, I agree with that.

16   Q     Repositories are used in the patents to manage the use

17   and distribution of digital content, right?

18   A     Yes, sir.  I think that's a fair characterization.

19   Q     And the repositories in the Stefik patents enforce the

20   usage rights?

21   A     Yes, sir, that's correct.

22   Q     Information in the usage rights tells the repository

23   what it can and cannot do with the digital content, correct?

24   A     Yes, sir.

25   Q     And one of the other things that repositories do in the
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 1  Stefik patents is to store digital content such as books and

 2  movies?

 3  A    Yes, sir, that's also true.

 4            MR. PRITIKIN:  Can we put up the definition of the

 5  repository, Mr. Simmons?

 6  Q   (By Mr. Pritikin) And, of course, you're familiar with

 7  the Court's definition of repository?

 8  A    Yes, sir.

 9            MR. PRITIKIN:  And let's put up the three

10  integrities, Mr. Simmons.

11            THE COURT:  Mr. Pritikin, would you mind slowing

12  down just a little bit?

13            MR. PRITIKIN:  I will, Your Honor.

14            THE COURT:  Thank you.

15            MR. PRITIKIN:  Do we have them all on one slide?

16            All right.

17  Q   (By Mr. Pritikin) You're familiar with the three

18  integrities, Dr. Goodrich?

19  A    That is correct, sir.

20  Q    And I'm not going to put all three up.  I think we've

21  seen those.  But you understand that in order to prove its

22  infringement case, ContentGuard has to prove that all of the

23  Apple servers and devices maintain the three integrities in

24  support of usage rights, correct?

25  A    Yes, sir.
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 1   Q     Now, you would agree that ContentGuard can't prove its

 2   case by simply showing that Apple has a secure system,

 3   correct?

 4   A     It depends how you define "secure."  If it's defined

 5   in -- in terms of these three integrities, then that would

 6   satisfy it.

 7   Q     But you've got to match the integrities, correct?

 8   A     Yes, sir.

 9   Q     And one could have a secure system that doesn't use the

10   three integrities, right?

11   A     Again, it depends how you define "secure."  I -- I

12   haven't seen an alternative definition from the Court for

13   what is secure.

14   Q     One could have a digital rights management system that

15   doesn't use the Stefik patents, correct, sir?  You'll agree

16   with that?

17   A     There are things that would be called digital rights

18   management that would not be satisfying the Stefik patents.

19   Q     One could have a successful mass distribution system of

20   movies and books that does not use the Stefik patents,

21   correct, sir?

22   A     That seems possible.

23   Q     Now, ContentGuard can't prove its case by simply

24   showing that Apple has a DRM system, right?

25   A     DRM beyond -- just in that broad sense, that's not
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 1   sufficient.  It has to satisfy each of those elements of the

 2   claims, as I did in my claim chart.

 3   Q    Okay.  Now, during your direct examination, I thought I

 4   heard you say that it was unimaginable that Apple would not

 5   have a high level of security for its servers because they

 6   contain customer information.

 7        Do you recall saying something to that effect?

 8   A    Yes, sir, I recall that.

 9   Q    But the test for whether something is a repository or

10   not is not how secure it is, but whether it satisfies the

11   Court's claim construction for the three integrities; isn't

12   that correct, sir?

13   A    It is incorrect.  That's correct, yes, sir.

14   Q    And you weren't trying to suggest to the jury, were

15   you, that the three integrities are present just because

16   Apple's system is secure?

17   A    No.  What I was trying to suggest is that I can't

18   imagine of any other way of installing software on a server

19   that wouldn't achieve behavioral integrity.

20   Q    But you were not suggesting that all of the integrities

21   are satisfied simply because Apple has a secure system, to

22   be fair, were you?

23   A    No, sir, because "secure" is not a claim term.  It's

24   "trusted" or "repository" that is a claim term in this case.

25   Q    And many companies have secure systems for handling
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 1   customer information without using any of Dr. Stefik's

 2   inventions.

 3        You would agree with that?

 4   A    Again, it would depend on how you define "secure," but

 5   under a reasonable definition of secure that would not have

 6   the integrities, that seems possible.

 7   Q    Behavioral integrity requires that software include a

 8   digital certificate in order to be installed in the

 9   repository, right?

10   A    Yes, sir, that is correct.

11   Q    And the reason for requiring behavioral integrity is to

12   make sure that software is not installed in the repository

13   that could potentially corrupt it or compromise the DRM

14   system, right?

15   A    I wouldn't characterize behavioral integrity in that

16   way.

17   Q    Well, if a virus was introduced into a repository, that

18   could compromise the ability of the repository to do what

19   it's supposed to do?

20   A    That certainly would compromise its -- its

21   functionality.

22   Q    And Dr. Stefik's solution to this problem was to

23   require that the software that is installed in a repository

24   must include a digital certificate?

25   A    Yes, sir, that's correct.
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 1   Q     You understand that Apple has two different sets of

 2   servers that are involved in its DRM system:  The FairPlay

 3   servers and the iTunes servers?

 4   A     Yes, sir, I'm aware of that.

 5   Q     Different sets of servers?

 6   A     Yes, sir.  They're -- they -- they communicate, and

 7   they share a software base, but they're different sets of

 8   machines.

 9   Q     And they perform different functions?

10   A     And they perform different functions, yes, sir.

11   Q     And you'd agree that ContentGuard has to prove that

12   both the FairPlay servers and the iTunes servers are

13   ContentGuard repositories?

14   A     Yes, sir, I agree with that.

15   Q     You'd agree that if either of the FairPlay servers or

16   the iTunes servers don't qualify as repositories, then Apple

17   doesn't infringe any of the Stefik patents, right?

18   A     I believe that is correct, yes, sir.

19   Q     Now, the FairPlay servers are the servers at Apple that

20   run Apple's FairPlay DRM system, correct?

21   A     Yes, sir.

22   Q     And if Apple's FairPlay servers do not require software

23   to include a digital certificate in order to be installed,

24   then those servers don't have behavioral integrity, do they?

25   A     They would -- they would require to have a digital
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 1   certificate in order for software to be installed or its
 2   equivalent in order to satisfy that element of behavioral
 3   integrity.
 4   Q    Sir, you did not offer an opinion as to equivalence on
 5   behavioral integrity for the FairPlay servers, did you?
 6   A    No, I didn't -- yes, I did, in fact.
 7              MR. PRITIKIN:  May I approach, Your Honor?
 8              THE COURT:  Yes.  Approach the bench, counsel.
 9              (Bench conference.)
10              THE COURT:  Yes.
11              MR. PRITIKIN:  Yes.  This was the subject of the
12   slides in the discussion we had yesterday, and the
13   equivalence was limited to the iTunes servers.  We've been
14   all around the barn on that.  He did not offer that opinion.
15   He was barred from offering that opinion.  It was not in the
16   report.
17              THE COURT:  And he just said:  Yes, I did.
18              MR. PRITIKIN:  He just said:  I did.  And that
19   isn't right.
20              THE COURT:  He said:  No, I didn't.  Then:  Yes, I
21   did.  He said it both ways.
22              MR. THOMAS:  I think it's subject for
23   cross-examination, Your Honor.  I mean, certainly he's -- he
24   could show the slide that the doctor testified to, and he
25   could say:  Where is it here?  I mean, he testified nothing
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 1   beyond what was on the slide.

 2              If Mr. Pritikin --

 3              MR. PRITIKIN:  No.

 4              THE COURT:  What are you asking me to do,

 5   Mr. Pritikin?

 6              MR. PRITIKIN:  I don't think the witness -- well,

 7   I'm not exactly sure what we should do at this point, Your

 8   Honor.  He should not have said that.  He was not permitted

 9   to say that.  It was beyond his report.  He didn't offer

10   that testimony.  I think the last answer should be stricken.

11              MR. THOMAS:  I think the appropriate way to do

12   this, Your Honor, is for him to go back, show this witness

13   the slide that he testified to, and then have this

14   witness -- if he thinks he can do it, point out where that

15   didn't occur.  That would be the appropriate

16   cross-examination.

17              MR. PRITIKIN:  I shouldn't be put to that, Your

18   Honor.  He said something that was --

19              THE COURT:  Here's what we're going to do.  I'm

20   going to strike the last answer.  Then you're going to ask

21   the question again and see what kind of answer we get this

22   time.  I mean, that ought -- that ought -- he ought to

23   understand where he is.

24              MR. THOMAS:  I believe he's -- he's being

25   consistent with what he had on that slide, Your Honor.
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 1  That's what I think he believes he's doing.

 2              THE COURT:  Let's try again.  If we need to

 3  re-approach, we will.

 4              MR. PRITIKIN:  All right.  So we'll strike the

 5  answer, and I'll ask the question again.

 6              (Bench conference concluded.)

 7              THE COURT:  Ladies and gentlemen, I'm going to

 8  instruct you to disregard the last question and the last

 9  answer, and now we'll proceed from there.

10  Q    (By Mr. Pritikin) To be clear, Dr. Goodrich, the

11  opinion you offered on Doctrine of Equivalents for

12  behavioral integrity related to the iTunes Servers, and that

13  was all that was in your report and all you testified to,

14  right?

15  A    No, sir, that's not correct.

16              MR. PRITIKIN:  May we approach, Your Honor?

17              THE COURT:  Yes, approach the bench.

18              (Bench conference.)

19              MR. PRITIKIN:  He's putting us in a difficult

20  position, Your Honor, because he should have been instructed

21  on this by counsel before he took the stand that he was not

22  permitted to do this.

23              MR. THOMAS:  I think the confusion here, Your

24  Honor, is -- is the question is not clear with respect to

25  what Dr. Stefik -- I'm sorry -- Dr. Goodrich thinks he may
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 1  have offered an opinion on either in his report or in his

 2  deposition testimony.

 3          I think this could get cleared up if Mr. Pritikin

 4  would just show him the slide that he used and say:  Look,

 5  this is only the iTunes servers.  That's all you explained

 6  in your testimony, right?  And I think he's going to say

 7  yes.

 8          THE COURT:  I think that's reasonable at this

 9  point.  Now, that slide's available?

10          MR. THOMAS:  Sure it is.

11          THE COURT:  Your guy has it?

12          MR. THOMAS:  Yes.

13          MR. PRITIKIN:  What slide number is it?

14          MR. CHANDLER:  62, somewhere around there.

15          MR. THOMAS:  62 or 60 -- 62, I think, was the

16  actual function-way-result, and 63 was the image.

17          MR. PRITIKIN:  Well, we can try it again.  I'd

18  like to have the last question and the last answer stricken

19  again because it's contrary to the -- the ground rules.  I

20  can put up the slide.

21          THE COURT:  I just don't want you to have to

22  fumble around for the slides.  If you need to find exactly

23  which ones they are, let's do it.

24          MR. PRITIKIN:  63?

25          MR. THOMAS:  I'm confident it's 63.
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 1                THE COURT:  All right.

 2                (Bench conference concluded.)

 3                THE COURT:  All right.  Ladies and gentlemen, same

 4   instruction, disregard the last question, disregard the last

 5   answer.

 6                All right.  Let's proceed.

 7   Q    (By Mr. Pritikin) All right.  Let's try it another way,

 8   Dr. Goodrich.  Let's put up Slide 63, which is the subject

 9   of what you presented in the courtroom here yesterday.

10   A    Certainly.

11   Q    This was the slide you presented on the Doctrine of

12   Equivalents, correct?

13   A    Yes, sir.

14   Q    And it related to the iTunes servers, not the FairPlay

15   servers?

16   A    That is correct, sir.

17   Q    Right.  And this was the only opinion you presented in

18   the courtroom on Doctrine of Equivalents, correct, sir?

19   A    Yes, sir.

20   Q    All right.  Now, let's go back to the FairPlay servers.

21   To satisfy the Court's claim construction for behavioral

22   integrity, every single time that the FairPlay server

23   software is updated, that software must include a digital

24   certificate, correct?

25   A    Yes, sir.
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 1   Q     Now, you understand that Apple contends that it does

 2   not require software updates for the FairPlay servers to

 3   include a digital certificate, right?

 4   A     Yes, sir, I'm aware of that.

 5   Q     And you knew that in order to make out a case of

 6   infringement, you had to find something you could point to

 7   to say that the FairPlay updates include digital

 8   certificates, right?

 9   A     I wouldn't characterize it that way.

10   Q     Well, you had to find something to satisfy that claim

11   requirement, correct, sir?

12   A     I did my analysis just looking at the evidence,

13   comparing that to the claim terms as defined by the Court.

14   Q     Well, let me try it another way.  If you couldn't find

15   a requirement that digital certificates be included in

16   software that's used to update the FairPlay servers,

17   ContentGuard wouldn't have a case, would they?

18   A     So they would -- in order for those FairPlay servers to

19   be updated, they would need to have digital certificate or

20   its equivalent in order to satisfy that claim element.

21   Without that, there would not be infringement.

22   Q     Let's take a look at your Slide 61.

23         Now, this is the slide you showed the jury yesterday to

24   try to explain why you thought there was behavioral

25   integrity when the FairPlay servers are updated.  Do you
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 1   recall that?

 2   A    Yes, sir.

 3   Q    And if we focus on the FairPlay servers at the top,

 4   what you described as meeting the requirement for behavioral

 5   integrity is something called SSL, right?

 6   A    Yes, sir.

 7   Q    And it's the SSL connection or channel that is in blue

 8   on this slide, right?

 9   A    Yes, sir.

10   Q    And the way SSL works is that it sets up a secure

11   channel between two computers, right?

12   A    That's one way of -- of summarizing and characterizing

13   it, yes, sir.

14   Q    Okay.

15            MR. PRITIKIN:  Now we can take this slide down.

16   Q    (By Mr. Pritikin) Behavioral integrity is not the same

17   as communications integrity, is it?

18   A    No, sir.

19   Q    In fact, if they were the same, then we'd have two

20   integrities and not three, right?

21   A    That is correct, sir, yes, sir.

22   Q    But we have three.  And you need to have both

23   communications integrity and behavioral integrity in order

24   to have a repository for the Stefik patents, right?

25   A    Yes, sir.
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 1   Q     Now, while you're saying that the SSL connection that

 2   is used with FairPlay shows behavioral integrity, haven't

 3   you stated, sir, that an SSL connection is communications

 4   integrity?

 5   A     No, that's not a fair characterization of my opinion.

 6   Q     Well, let's take a look at Slide 33.

 7         In Slide 33, you're pointing to the SSL connection for

 8   communications integrity, aren't you?

 9   A     Yes, sir.  SSL can be used to show communications

10   integrity.

11   Q     And let's look at Slide 58.

12         And in Slide 58, you talk about an SSL connection, and

13   you're using it to show communications integrity, aren't

14   you?

15   A     Yes, sir.  SSL can be used to show communications

16   integrity between two repositories.

17              MR. PRITIKIN:  We can take that slide down.

18   Q     (By Mr. Pritikin) The truth of the matter is that you

19   couldn't find anything in the Apple system of updating

20   FairPlay servers that was behavioral integrity, could you,

21   Dr. Goodrich?

22   A     No, that's incorrect.

23   Q     And that's why you pointed to SSL, which is

24   communications integrity, and you hoped no one would notice

25   the difference.
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 1            That's what was going on, wasn't it, sir?

 2   A      That's also incorrect, and I can explain why.

 3   Q      By the way, you know whether Alan Ward's team at Apple

 4   is required to use an SSL connection to transfer software

 5   updates that are installed on the FairPlay system?

 6   A      My basis of that analysis was indeed based on the sworn

 7   deposition testimony of Mr. Ward and what he said.  I was

 8   going by his words.

 9   Q      Did he use the word "required"?

10   A      He said that they use the message of that with SSL to

11   install those updates.  He didn't qualify.

12   Q      Did he use the word "required"?

13   A      He did not use the word "required."  He didn't qualify

14   it either way.

15   Q      Now, let's turn to the iTunes Servers.

16          Those are different from the FairPlay servers, and

17   these also have to be repositories, right?

18   A      Yes, sir.

19   Q      And because Apple doesn't require digital certificates

20   for updates to the iTunes software, again, you searched

21   around for something that you could call behavioral

22   integrity, didn't you?

23   A      That is incorrect how you're characterizing it.

24   Q      Well, when we got to the case of the iTunes servers for

25   behavioral integrity, as we saw a few minutes ago, you
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 1   relied on something called the Doctrine of Equivalents.

 2         Do you recall?

 3   A     Yes, sir.  I -- I relied on both the literal definition

 4   and determination for behavioral integrity, as well as

 5   achieving that element using the Doctrine of Equivalents.

 6   Q     Well, let's talk for just a moment about the Doctrine

 7   of Equivalents, Dr. Goodrich.

 8         When there's infringement under the Doctrine of

 9   Equivalents, that's because the patent owner can't prove

10   that the claims of the patent are literally met, right?

11   A     I'm not an attorney so I'm just going by what attorneys

12   told me about the law with respect to when is the Doctrine

13   of Equivalents applicable.

14   Q     What I said is correct, isn't it, sir?  That's your

15   understanding?

16   A     I don't have anything to disagree with that opinion.

17   Q     And, now, a patent owner can't prove infringement under

18   the Doctrine of Equivalents by showing that an accused

19   system is just similar or generally the same.  That's not

20   your understanding, is it?

21   A     I think that's true, what you just said.

22   Q     You have to focus on the specific claim requirement

23   that's missing, and then you have to determine whether there

24   is an insubstantial difference between that claim term and

25   the way the accused system works.  That's consistent with
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 1   your understanding?

 2   A     Yes, sir, it is.

 3   Q     For example, if a patent involved gluing two materials

 4   together and an accused product substituted a different glue

 5   for the one named in the patent, that might be an

 6   insubstantial difference?

 7   A     That could be such an example, yes, sir.

 8   Q     Now, for iTunes and your Doctrine of Equivalents and

 9   your infringement analysis, you said that an SSH secure

10   channel is used to transmit software updates; is that

11   correct?

12   A     I think that's a fair characterization, yes, sir.

13   Q     And, again, an SSH channel is like an SSL channel; it's

14   a secure channel?

15   A     It's -- it's a secure channel that's established using

16   digital certificates.

17   Q     And you've agreed with me that communications integrity

18   is not the same as behavioral integrity.  We can agree on

19   that?

20   A     Yes, sir.

21   Q     During your direct examination, you said that you were

22   applying the Doctrine of Equivalents to only -- I think the

23   words you were -- used were "some little piece of the

24   claim."

25         Do you recall that?
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 1  A     I -- I may have said that.  I don't recall it

 2  immediately, though.

 3  Q     But for purposes of infringement, there aren't little

 4  pieces of the claim, are there?  All the claims are

 5  important.

 6  A     Yes, sir, that's right.

 7  Q     You can't gloss over a requirement in the claim just

 8  because you think it's not important or it's a little piece.

 9  A     No.  I'm sorry if I said that, if I made that

10  impression.

11  Q     One of the other things you talked about were the

12  Akamai servers on direct examination.

13        Do you recall that?

14  A     Yes, sir.

15  Q     And many companies use Akamai because it allows them to

16  distribute content to customers faster.

17  A     Yes, sir.  I think that's a fair characterization.

18  Q     Because they're located around the country.

19  A     They're located all over the world, in fact.

20  Q     You understand that Apple contends that another reason

21  that there is no infringement here is because the Akamai

22  servers are not repositories.

23        You understand that?

24  A     Yes, sir.

25  Q     Now, during your direct examination, I believe you said
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 1   that the content that is stored on the Akamai servers is all

 2   encrypted.

 3        Do you recall that?

 4   A    Yes, sir.

 5   Q    But to be clear, you are not saying, are you, that

 6   because the content is encrypted, that somehow makes the --

 7   the Akamai servers repositories.

 8   A    No, sir.  I don't think the Akamai servers are

 9   repositories.

10   Q    Now, the user devices also have to have behavioral

11   integrity in order for the Stefik patents to be infringed,

12   right?

13   A    Yes, sir.

14   Q    And let's put up your Slide 60, if we could for a

15   moment.

16        And this is the slide where you talked about behavioral

17   integrity on customer devices.

18   A    Yes, sir.

19   Q    And in the text, you talk about app code sign-in.

20        Do you see that?

21   A    In that text here?

22   Q    Yes.

23   A    Yes.

24   Q    And, now, apps is the things you download on to your

25   smartphone and your Apple, right?
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 1   A     Yes, sir.

 2   Q     I mean, there are millions and millions of them that

 3   you can order.

 4   A     I believe that's correct.

 5   Q     Weather Channel, Facebook, there are all kinds of apps

 6   that people can order and put on their phones and their --

 7   their tablets?

 8   A     That, indeed, is -- is true, yes, sir.

 9   Q     Now, you understand that 90 percent of what customers

10   get from the iTunes Store is apps and not movies and books.

11   A     I -- I don't have a -- any reference for the market

12   size of how many apps compared to other things.

13   Q     But you do understand that Apple's FairPlay system is

14   used to protect apps that are downloaded from the iTunes

15   Store?

16   A     I didn't study apps as a part of this case.

17   Q     In any event, it's fair to say that there's no

18   allegation in this case that the use of FairPlay, with all

19   of the apps that are downloaded from the iTunes Store,

20   infringes any of the Stefik patents?

21   A     I don't believe that ContentGuard is accusing apps of

22   infringement.

23   Q     Now, if the user devices in the Apple system are not

24   repositories, then there's no infringement of the

25   ContentGuard patent claims, right?
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 1  A     I agree with that.

 2  Q     And if the user device permits software that does not

 3  include a digital certificate to be installed, they're not

 4  repositories?

 5  A     I agree with that, yes, sir.

 6  Q     When movies and books and music are downloaded and put

 7  on user devices, they do not include digital certificates,

 8  do they?

 9  A     They do.  They are required to include digital

10  certificates in order to be put on the device and -- and to

11  be able to be played.

12  Q     So your testimony, sir, is that movies and books and

13  music that are downloaded and put on customer devices

14  include digital certificates?  Is that your testimony, sir?

15  A     Yes, sir.  They're in the SINF in this case, the

16  digital certificate.

17          MR. PRITIKIN:  Your Honor, may we approach?

18          THE COURT:  Approach the bench.

19          (Bench conference.)

20          MR. PRITIKIN:  We're back where we were before.

21  This is the -- this is what was excluded on the SINF.  The

22  testimony he had given prior to trial was that there are not

23  digital certificates in the movies and the books, and this

24  new and late opinion that somehow the SINF includes a

25  digital certificate was what was stricken yesterday when
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 1  they tried to slip it into the slide, and then we -- it was

 2  taken off that slide.

 3          MR. THOMAS:  Actually, I don't think the entire

 4  portion of the SINF was -- was taken off, but if there is a

 5  prior testimony or something in his report where he said

 6  there is not a digital certificate with a content, I believe

 7  Mr. Pritikin can try to impeach him with that statement, if

 8  it exists.  I don't think it exists, but if it does, then

 9  you can impeach the witness with it.

10          MR. PRITIKIN:  What I would suggest, Your Honor,

11  again, why don't we do it the same way?  Let's just strike

12  the last question and last answer, and we'll move on.

13          THE COURT:  All right.

14          MR. PRITIKIN:  I don't think it's proper for him

15  to be offering these opinions that are stricken in the

16  course of --

17          THE COURT:  All right.

18          MR. PRITIKIN:  -- cross-examination.

19          THE COURT:  We'll do that.

20          (Bench conference concluded.)

21          THE COURT:  Ladies and gentlemen, I'm going to

22  instruct you to disregard the last question and answer.

23          And we'll move on to the next question, Counsel.

24          MR. PRITIKIN:  Very good.  Thank you, Your Honor.

25  Q    (By Mr. Pritikin) I believe you testified on direct
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 1  about something called a description tree file.  Do you

 2  recall that?

 3  A    No, sir.

 4  Q    In the Stefik patent?

 5  A    I'm not recalling what you're referring to now.  I'm

 6  sorry.

 7  Q    Do you recall giving testimony about a description

 8  tree?

 9  A    No, sir, I don't remember that.

10  Q    All right.

11  A    Are you talking about in a deposition or during the

12  trial?

13  Q    During the trial yesterday.

14  A    I don't recall this.

15           MR. PRITIKIN:  Let's put up Slide 11.

16  Q    (By Mr. Pritikin) Do you recall that this relates to a

17  description tree?

18  A    This is relating to a description of a usage right.

19  Q    All right.  And it's a description of a usage right.

20  It's not the usage right itself, correct, sir?

21  A    That is correct.

22  Q    All right.

23  A    The usage right itself would be something that a human

24  would understand.  This is something that a computer would

25  understand.  Hence, it's a description.
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 1              MR. PRITIKIN:  We can take that down.
 2    Q    (By Mr. Pritikin) Now, you understand that under the
 3    Court's claim construction, usage rights must be attached or
 4    treated as attached to the content, correct?
 5    A    Yes, sir.
 6    Q    And you would agree that there's a difference between a
 7    usage right that is associated with a piece of content and a
 8    usage right that is attached or treated as attached to a
 9    piece of content?
10    A    Yes, sir, I agree with that.
11    Q    And associated is not enough for something to be
12    attached or treated as attached, correct, sir?
13    A    That's correct.  You need to have enforcement software
14    that would be treating as attached that usage right to the
15    content.
16    Q    Please be clear in your response to -- let me ask it
17    again, sir.
18    A    Certainly.
19    Q    Associated is not enough to meet the requirement of
20    attached or treated as attached?
21    A    I agree.  A mere association is not sufficient.
22    Q    And you would also agree that a reference is not enough
23    to be treated -- attached or treated as attached --
24    A    Absolutely.
25    Q    -- isn't that correct, also, sir?
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 1   A     Absolutely.  A simple reference is not sufficient.

 2             THE COURT:  Let's make sure the other one is

 3   finished before the answer or next question is given.

 4             THE WITNESS:  Thank you, Your Honor.

 5             THE COURT:  Let's continue.

 6   Q    (By Mr. Pritikin) Now, you understand that Apple

 7   contends that the use in its system is controlled with the

 8   account keys?

 9   A     I'm -- I'm not understanding that question.  I'm sorry.

10   Q     Well, let me ask the question this way:  If you rent a

11   movie, you get a rental key, right?

12   A     Yes, sir, that's correct.

13   Q     And without the rental key, you can't watch the movie?

14   A     That is also correct, yes, sir.

15   Q     In the Apple system, unless there is an account or a

16   rental key on the user's device, the user cannot play the

17   content or watch it?

18   A     Without those keys, you cannot play or watch the movie,

19   that is correct.

20   Q     And in the Apple system, neither the account key nor

21   the rental key is ever saved as part of the same file as the

22   digital content on the user's device, correct?

23   A     Yes, sir, that's correct.

24             MR. PRITIKIN:  I have no further questions.  I

25   pass the witness, Your Honor.
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 1                THE COURT:  All right.  Redirect, Mr. Thomas?

 2                MR. THOMAS:  Yes, Your Honor.

 3                If I could have, please, Mr. Diaz, Slide 36 from

 4    Dr. Goodrich's presentation.

 5                         REDIRECT EXAMINATION

 6    BY MR. THOMAS:

 7    Q    Do you recall, Dr. Goodrich, just a moment ago,

 8    Mr. Pritikin was asking you about whether or not this Akamai

 9    CDN was a repository?

10    A    Yes, sir, I recall that.

11    Q    Now, in this picture where you were explaining to us

12    how the content is sent, what are all these other boxes that

13    are in the Internet cloud?

14    A    What I was trying to illustrate with these other boxes

15    in this cloud is a visual representation of how the Internet

16    works.  The Internet is -- consists of a whole bunch of

17    computers that are routers or hosts that are spread out all

18    over the entire world.

19                And then as Dr. Stefik explained when he was

20    testifying, if somebody is going to be sending information

21    from one place to another, it has to get broken up in two

22    different pieces that are called packets.  And then those

23    packets are shipped out through these various paths in the

24    Internet.

25                And so there's all of these different places along the
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 1   way where those packets are going to be stored -- we call

 2   cached -- stored temporarily and then shipped to the next

 3   hop, the next hop, the next hop, until finally it reaches

 4   its destination.

 5       And this happens fast enough that we sort of feel like

 6   it's like a flowing, but really it's just a hop and a hop

 7   and a hop, one at a time through the Internet.

 8   Q    Now, does Dr. Stefik's patents say that all of these

 9   hops, these routers or switches on the Internet, have to be

10   repositories as he's defined that term in his patents?

11   A    No, sir.

12   Q    What has to be a repository?  As you're looking at this

13   picture, this image here, what has to be a repository and

14   possess the three integrities that Dr. Stefik described in

15   his patent?

16   A    The parts of -- of this diagram that have to be

17   repositories, with respect to Dr. Stefik's patent, are that

18   store up in the upper right-hand corner and then the

19   customer device that it is interacting with.

20   Q    So do any of these hops or switches or routers over

21   which the information is thrown -- is transmitted over the

22   Internet, do any of those have to be repositories in order

23   to be using Dr. Stefik's inventions?

24   A    No, sir.

25       And, indeed, this is the motivation behind
```

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 1   communications integrity, why you want to have encrypted

 2   channels, why you would want to send content in encrypted

 3   format if it's going to be stored temporarily along the way

 4   on any of these hops or even in this Akamai CDN.

 5   Q     And Mr. Pritikin asked you some questions about SSL.

 6   Do you recall those?

 7   A     Yes, sir.

 8   Q     And he was asking you about whether or not SSL could be

 9   used to present or provide communications integrity.  And

10   can it?

11   A     Yes, sir.

12   Q     And is it possible and can the secure socket layer

13   protocol also be used as part of providing behavioral

14   integrity?

15   A     Yes, sir.  It can do that as well.

16   Q     Is there anything mutually exclusive about how you can

17   use SSL to provide behavioral integrity and provide

18   communications integrity?

19   A     No, sir.  The difference is who you're talking to.  If

20   you're just talking between two devices, then -- two

21   repositories, that could be used to represent communications

22   integrity.

23         But if you're now a communication that's happening

24   between a software installer and the machine that he or she

25   is installing the software on, now that digital certificate
```

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 1  can be used for behavioral integrity, because it's being

 2  required for the installation of the software.

 3  Q    Thank you, Dr. Goodrich.

 4            MR. THOMAS:  I have no further questions, Your

 5  Honor.  I pass the witness.

 6            THE COURT:  Additional cross, Mr. Pritikin?

 7            MR. PRITIKIN:  Could we put up that slide that

 8  shows the Akamai servers again for just a moment?

 9            36, I think it is.

10            That's the one, yeah.

11                      RECROSS-EXAMINATION

12  BY MR. PRITIKIN:

13  Q    You were just asked a couple of questions about this,

14  Dr. Goodrich.  You're not suggesting, are you, that the

15  Akamai servers are just routers and switches on the Internet

16  in the Apple system, are you?  Is that what you're telling

17  the jury?

18  A    No, sir.  It's -- they're -- they're a place where

19  content is cached.

20  Q    And that --

21  A    And that's direct testimony from Dr. Gentil -- or

22  Gentil (pronouncing).

23  Q    Now, when things fly over the Internet, the whole file

24  gets broken up and runs through different routers and

25  switches, right?
```

```
 1   A    Yes, sir.

 2   Q    But when the digital works are on the Akamai server,

 3   the whole file is there, correct?

 4   A    Yes, sir.

 5   Q    And that's different from the router and a switch?

 6   A    That's correct, sir.

 7            MR. PRITIKIN:  I pass the witness, Your Honor.

 8            THE COURT:  Redirect?

 9            MR. THOMAS:  No further questions, Your Honor.

10            THE COURT:  You may step down, Dr. Goodrich.

11            THE WITNESS:  Thank you, Your Honor.

12            THE COURT:  Plaintiff, call your next witness.

13            MR. THOMAS:  Yes, Your Honor.

14            Plaintiffs call as our next witness Dr. David

15   Martin.

16            THE COURT:  All right.  If you'll come forward,

17   Dr. Martin.

18            THE WITNESS:  Thank you.

19            THE COURT:  Please have a seat at the witness

20   stand.

21            All right.  Mr.  Thomas, you may proceed.

22    DAVID MARTIN, Ph.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

23                    DIRECT EXAMINATION

24   BY MR. THOMAS:

25   Q    Good morning, sir.
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 1  A    Good morning.

 2  Q    We've heard your name, but if you could, just introduce

 3  yourself to the jury, please.

 4  A    Yes, sir.

 5       Good morning.  My name is David Martin.

 6  Q    Dr. Martin -- I believe it is doctor, correct?

 7  A    Yes, sir.

 8  Q    What is your role in -- in this case?  Why are you

 9  here?

10  A    I've been asked to analyze a different part of the

11  case.  There's another patent in this case, we haven't heard

12  very much about.  It's called the '053 patent, also the

13  meta-rights patent.  And I was asked to investigate Apple's

14  system and analyze it with respect to that patent.

15  Q    And before we get to your analysis, I'd like to just go

16  through a little bit about your background.

17       So, if you could, sir, have you prepared something that

18  you could use to show us a little bit about your background,

19  your experience, and your education?

20  A    Yes, sir, I have.

21  Q    And I think we've got on here indications and

22  explanation of your educational background.  Could you just

23  walk us through that, please?

24  A    Yes, sir.

25       I studied as a double major computer science and
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 1  mathematics at Iowa State University.  I graduated in 1993

 2  with distinction.

 3       I then studied for my Ph.D., my doctorate in computer

 4  science at Boston University.  I graduated there in 1999.

 5  And I became a computer science professor where I worked at

 6  the University of Denver and then Boston University and then

 7  at the University of Massachusetts Lowell.

 8       I'm currently affiliated with the faculty of computer

 9  science at Iowa State University.

10  Q    When you were working on obtaining your various

11  degrees, in particular, your doctorate degree, your Ph.D. in

12  computer science, did you have an area of focus that you

13  focused on in your work?

14  A    Yes, sir.  My research area was Internet security and

15  privacy.

16  Q    And have you been published?  Have you written any

17  articles that have appeared in various journals in your

18  field of expertise, Dr. Martin?

19  A    Yes, sir, I have.

20  Q    And what do you -- can you just explain to us by way of

21  example some of these sample publications that you've

22  contributed to the various periodicals?

23  A    Yes, sir.  I'll mention the first and the last on this

24  slide.  The first is -- has to do with recognizing malware.

25  That's hostile software that you want to avoid having.  And
```

1   that was published in the *Journal of Virology*. And this

2   isn't human virology; this is computer viruses. That's what

3   that's about.

4   And the last entry on this slide has to do with the

5   protection of security parameter around a network and how

6   you can control what comes and goes through that network,

7   and it had to do with Java applets at the firewall. That

8   was in 1997.

9   Q   Now, could you explain to us what your work experience

10 has been? Outside of your educational and academic career,

11 what has been your regular work career?

12 A   I've been working in computer software a very long

13 time. My first paid job was over 35 years ago, and at that

14 time, this was -- in the early '80s, I remember programming

15 commercial software for Apple computers at that time.

16   And I've been employed in the industry ever since

17 working for both small firms and large firms, some examples

18 on the top of this slide.

19 Q   35 years. You don't look that old. How old were you

20 when you were first paid as a programmer or paid for your

21 work as a professional software developer?

22 A   I think my first paid job was when I was 13 years old.

23 Q   And if you could, just explain to us who some of these

24 companies are that you've worked with over your 35-year

25 career.

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 1   A    For example, Hewlett-Packard in the top left, I worked

 2   with them when I was studying in Germany.  I also worked for

 3   Lucas Film in their games division.  And then I also listed

 4   a couple of the smaller firms, the startup companies who was

 5   building new products and marketing them.

 6   Q    And I see here that you say you have extensive

 7   experience with software, analysis of software, from

 8   companies like -- you've got Microsoft, Apple, Google,

 9   Amazon.

10        Now, does this mean that you worked for these

11   companies, Dr. Martin?

12   A    No.  I've never been an employee of any of these

13   companies.  But in my consulting work, I have had the

14   opportunity to look closely at the confidential software of

15   these companies in order to understand how they work and

16   then describe that behavior to other people.

17   Q    I believe a moment ago you mentioned that your role in

18   this case was focused on the '053 patent; is that correct?

19   A    Yes, sir.

20   Q    What generally does the -- the '053 patent relate to?

21   What -- what is the invention that it's claiming and it's

22   describing?

23   A    The '053 patent, we call it the meta-rights patent and

24   concerns a different part of the system than the so-called

25   Stefik patents from Dr. Stefik.
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 1        It also describes this concept of sharing rights; not

 2   just having a single right in isolation that is used on a

 3   single device, but rather how that right can be shared

 4   through multiple devices or user.

 5   Q    What's an example of an instance where one might want

 6   to share a single right among multiple users or devices?

 7   A    I have a little illustration on the top right of this

 8   slide where I have a family.  They have multiple devices,

 9   but the idea is you only need to have one account in order

10   to share some of the content.

11        It could be that the father in this family has bought

12   the movies, has bought the copy of Avengers on his own

13   device, but the other family members may have devices that

14   are attached to the same account.

15        So the movie only has to be purchased once, but it can

16   be -- the right to watch it can be shared and used on

17   multiple devices.

18   Q    Now, I see you've highlighted in the title of the '053

19   patent:  Using shared state variables.  How does this using

20   shared state variables, this generally relate to the

21   invention that's described in the '053 patent?

22   A    To achieve this idea of sharing the rights, which is

23   mentioned in the abstract below, to achieve that, the

24   technique -- one of the techniques taught by this patent is

25   using state variables in a shared way, so that's why it's in
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 1   the title of this patent.

 2   Q   Now, could you explain to us exactly where this idea of

 3   meta-rights versus usage rights come into play in the system

 4   that we're focused on in this case; that is, the Apple

 5   system?

 6   Have you prepared something that you could help -- you

 7   could use to help us explain where those two things fit?

 8   A   Yes, I have a slide, but I want to emphasize that

 9   the -- I'm really looking at a different part of the system

10   than Dr. Goodrich analyzed. He was mostly concerned with

11   enforcing the usage rights when they're on a device, making

12   sure that -- that those rights requirements are respected

13   properly on the device.

14   But the meta-rights patent concern how do the rights

15   get into the system in the first place? Who says what those

16   usage rights are going to be? And that's what's addressed

17   here, and that's what I'm trying to illustrate on this

18   slide.

19   Q   Okay. And if you could walk us through this slide and

20   explain to us what the difference is between meta-rights and

21   usage rights within the context of the patents that we're

22   talking about in this case.

23   A   Yes, sir.

24   I'll start at the bottom of this slide because this --

25   this box figure on the bottom is Figure 2 from the '053

```
 1  patent -- should be in the notebooks -- and this figure

 2  depicts the idea of the patents in which a publisher creates

 3  rights, and the publisher then causes those rights to flow

 4  to other entities through a distributor and then ultimately

 5  to an end user.

 6       Now, the patent describes these rights as a flow.  They

 7  don't say exactly how these rights need to be transmitted or

 8  even exactly what's in them.  It leaves that open to whoever

 9  is reading this patent and maybe building a system against

10  this idea to decide those details, but it does describe the

11  flow of rights in the bottom.

12  Q    And if you could just take us through generally the --

13  from left to right how this flow of information proceeds

14  according to the Figure 2 from the '053 patent.

15  A    Yes.  And we sort of -- we have a loose correspondence

16  here between what the patent teaches on the bottom and what

17  I tell you in later slides about how Apple's system works.

18       So in the bottom, you can see we have the green

19  contracting bubble lit up.  This is a right that is being

20  sent from a publisher, like a movie studio, on to a

21  distributor which would be someone like Apple.  That's the

22  idea on the bottom.

23       And then in the top, what we actually have in Apple's

24  system is I'll show you a mechanism whereby a movie studio

25  can tell Apple what they want their rights to be associated
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 1  with a particular movie or TV shows.

 2       And so they'll indicate what those rights should be

 3  when Apple receives those instructions and then converts

 4  them into meta-right form at the distributor.  That's the --

 5  the big Apple logo in the middle.

 6  Q    And what does the distributor do when he's enforcing

 7  the meta-rights that the distributor has created from the

 8  instructions provided by the publisher?

 9  A    The distributor does a couple of things to enforce the

10  rights.  One is whenever a customer asks for those rights,

11  for instance, by purchasing a movie, the distributor will

12  evaluate the request and see whether it's permissible or

13  not, according to the rules specified by the studios.

14       And then if it decides it is permissible, the

15  distributor will then generate the usage rights and provide

16  them so that they can be enforced along with the underlying

17  content on a user device.

18  Q    Does the '053 patent describe what the meta-rights and

19  usage rights and these shared state variables, as you

20  pointed to in the title of the patent -- does it describe

21  where and what these things can be?

22  A    Yes, sir, it does.

23  Q    And do you have something you've created that can help

24  us understand where in the patent that's described?

25  A    Yes.  This is a block diagram from the patent.  It's an
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 1  excerpt from Figure 12 of the '053 patent.  And this is just

 2  setting out the fact that the patent does describe sort of

 3  the bridge between the usage rights and the meta-rights that

 4  control the generation of those usage rights.

 5       So it needs to have both of those pieces together in

 6  the system.

 7  Q    And what does the patent describe as examples of usage

 8  rights?

 9  A    The patent describes as usage rights, for example, you

10  can view a movie or maybe print a book or maybe excerpt some

11  content out of a book.

12  Q    And what does the patent describe as examples of

13  meta-rights?

14  A    Well, the meta-rights are one level removed from usage

15  rights.  The meta-rights say when can Apple or another

16  distributor create the usage rights.

17       So it -- in this quote here, it describes meta-rights

18  are the rights that one, say the distributor, has to

19  manipulate, modify, or otherwise derive other meta-rights or

20  usage rights.

21  Q    And where are the shared state variables identified in

22  this figure and in the patent?

23  A    The state variables that are shared that are going to

24  allow the sharing of content that's purchased only once,

25  they're controlled by what's shown here as the state of
```

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 1  rights manager in this diagram.

 2      There I have it highlighted now.  And that's where you

 3  would look to see the sharing of the state variables

 4  providing this account sharing.

 5  Q   And what does the patent say about these shared state

 6  variables?  I think you've got a quote there.

 7  A     Yes.  It explains, for example, that the shared state

 8  variables can be used to support a site license that grants

 9  a group of authorized users a right to print content.

10  Q     As part of your analysis here of both the Apple system

11  and this particular '053 patent, what materials did you

12  consider in arriving at your conclusions and performing your

13  evaluations?

14  A     I have a list of those coming up here.  Here we are.

15      So I tested and used Apple's systems, the movies and TV

16  purchasing and rentals.  I consulted Apple's both internal

17  and public documents, and I have a number of them here

18  that -- that I actually consulted in order to reach my

19  conclusions.

20      I also read through and considered all of the technical

21  deposition testimony of Apple's witnesses, and that's this

22  stack here.  These are the people designated by Apple as

23  most knowledgeable about the technical underpinnings of

24  their system, and so they described it, and I considered

25  that.
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 1          I also considered Dr. Smedley's source code analysis

 2   report.  I understand that we'll be hearing from him later

 3   today.  And he analyzed the blueprints from Apple's system

 4   and described how that worked.

 5          But I also had access to the source code.  I visited --

 6   visited the source code as provided by Apple.  I had my own

 7   set of printed copies of the code, and I did consider my own

 8   analysis as well.

 9   Q     And did you do anything to confirm to yourself that the

10   process that Dr. Smedley and his team were going through in

11   evaluating the source code that Apple produced in this case

12   was an appropriate and accurate way to evaluate that source

13   code?

14   A     Yes.  I had extensive conversations with Dr. Smedley,

15   and through my -- my exchange and my -- my own review of the

16   source code, I was able to -- to tell that -- that they were

17   analyzing it in an entirely appropriate and accurate way.

18   Q     Now, how does movies, content, be it books, TV shows,

19   feature films -- could you take us through in the Apple

20   system how that content, those movies, TV shows, or books,

21   actually get presented to Apple from the publishers or the

22   producers or the owners of that content such that Apple can

23   then make them available for rent or sale in the iTunes

24   Store?

25   A     Yes, sir.  Let's look at that.
```

```
 1        So if you remember this moment from Dr. Goodrich's

 2   testimony, he was describing the process that a customer

 3   would use to choose a movie and what the device would do in

 4   order to enforce its usage rights.

 5        So from that moment, I'm just going to step backwards

 6   in time and see how the movie ended up on this screen as a

 7   choice in the first place.

 8   Q    And how does that happen?

 9   A     In the lower right-hand corner of the current slide, we

10   can see the studios and publishers that originate the

11   content, and Apple provides systems that allows the studios

12   to transmit the content to Apple and effectively control the

13   rights that are to be associated with that content.

14        And that's what I'm illustrating here where the arrow

15   points up showing that the -- the movie -- The Avengers

16   movie has arrived at the iTunes server, it's locked, and

17   it's controlled by meta-rights that specify how it can be

18   used.

19   Q    And what have you just briefly and generally identified

20   for us?  What have you listed down here on the bottom of

21   this slide?

22   A    Oh, yes.  I'm citing to the -- the David Makower

23   deposition.  That's this one.

24        And there are a couple of other Apple documents that

25   specify how the content can -- can be -- the rules
```

```
 1   associated with the content are -- are to be specified by

 2   end users.  I've cited those as well.  Also, Dr. Smedley's

 3   source code analysis.

 4   Q    Now, how do the movie, TV show, movie publishers, TV

 5   shows, book publishers, what do they do?  What's the actual

 6   process that they go through when they want to upload the

 7   content to the iTunes Store?

 8   A    There are two different mechanisms that I'll talk

 9   about.  And the first one is using a program called iTunes

10   Connect.

11       On the next slide, I think we have -- there we go.  We

12   have an image of this.  And what I'd like to do is I have --

13   I made a video of the use of this program, so we can see

14   exactly how the studios control the use of their content.

15   Q    Okay.  Now, just to be clear, is this a program that

16   somebody who wants to watch a movie, buy or rent a TV show

17   or a picture or a book, is this something that an ordinary

18   consumer would look for -- would look at and be working

19   with?

20   A    No.  An ordinary customer would never see this

21   sequence.  This is something that only a movie studio

22   would -- would have access to or something like a movie

23   studio.

24   Q    Okay.  And if you could, just go ahead and walk us

25   through then this demonstration that you have prepared,
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 1   Dr. Martin.
 2   A     Okay.  Let me warn you that I'm going to appear to log
 3   in as Marvel Studios -- that's who created The Avengers
 4   movie -- but I don't have any association with Marvel
 5   Studios.  I don't work for them.  But I am just trying to
 6   give us an impression of what it looks like when a studio
 7   uses this tool.
 8   Q     And you didn't try to fake out Apple by putting your
 9   name and pretending to be Marvel Studios, did you?
10   A     No.  That was not my intent at all.
11   Q     Okay.  Please go ahead.
12   A     Okay.  So here we go.
13         All right.  So here's where I'm typing in the name,
14   productionl@marvel, and then I'll type in the password.
15         So now I've typed in my credentials to -- to access the
16   studio's information, and I'm looking at the choices
17   presented to me.
18   Q     Okay.  And what are some of the choices presented to
19   you here or to the movie studio or whoever wants to upload
20   their book, TV show, or movie to iTunes Store?
21   A     On the left we can see my movies.  That's where I can
22   enter the rights information associated with my movies.  And
23   there are several other choices here, including sales and
24   trends.  I can see how well my movies are being sold or
25   rented, and some -- some other information I can control as
```

1   well.

2   Q   Okay. So what happens when somebody clicks on --

3   somebody who wants to upload their content clicks on this

4   "my movies" icon?

5   A   Okay. Clicking on that, I've gone to the "add new

6   movie film" section here. So now the idea is that I would

7   tell Apple the title of the movie, the year, various

8   information about the movie so that it knows what to put up

9   on the screen to allow customers to shop for it.

10   So next I'll specify the language of the movie. It's

11 going to be United States, English. This is a feature film,

12 so I've selected that. It's from Marvel Studios, so I'll

13 type that in there.

14   And there's more information on the screen, but I'll

15 only show you this one now, the genre of the movie. I'll

16 say, well, this is a science fiction and fantasy movie. So

17 I think you get the idea of the screen now.

18 Q   And who, again, is this putting in the information?

19 A   This would be a studio, like Marvel Studios.

20 Q   All right. And after the content owner has gotten this

21 far, what happens next with respect to what they're going to

22 tell Apple about how Apple can sell that piece of content?

23 A   I've landed on another screen here, which is the rights

24 and pricing screen, and this is where I really enter the

25 information that's going to control how this movie can be

 1   sold and what rights are associated and the prices with the

 2   movie.

 3   Now, on this screen, there are four main areas that I'd

 4   like to talk about. This first area is where I'll enter the

 5   rating information about the movie, that -- you know, the R,

 6   PG, whatever it is.

 7   The next area, okay, this part is called

 8   Video-On-Demand. This is industry jargon. It means

 9   rentals. Everyone called it Video-On-Demand, or sometimes

10   VOD, but it means rentals. And so here I'll enter

11   information about rentals.

12   On the left there's more jargon, electronic

13   sell-through. That just means purchases, when you buy a

14   movie and then you get to watch it basically indefinitely,

15   it doesn't expire.

16   And then on the lower part of the screen, that's where

17   I'll enter the pricing information about the movie.

18   So as we go through this next. I'm going to step

19   through each of these areas in sequence and just enter in

20   the information so you can see what sort of choices I have.

21   Okay. We started with the rating. I'm going to mark

22   this as a PG-13 movie. Next to the electronic sell-through

23   area, where I'm setting the date of release of this movie,

24   September 8th, 2015.

25   And then I'm going to click down in the bottom and

```
 1   enable HD, enable EST HD.  So this is a high-def movie.

 2   People can buy it in high-def format, not just the standard

 3   definition.

 4        I'm in the rental part of the screen now, and I'll

 5   enter the same date.  It will be available at the same time

 6   also for rental in high-definition.  And then I'll scroll

 7   down and pause here.

 8        The next part is where I'll enter the pricing

 9   information.  And as you see, there are two different boxes

10   on the top, the HD wholesale price tier and the SD wholesale

11   price tier, and so there I'll fill those in separately.

12        Pricing is done through this tier mechanism where I

13   have to say it's Tier 1 or Tier 101 and that turns into a

14   dollar amount.

15        So there, I filled out the rights and pricing

16   information on this screen.  And next I'll click through to

17   what comes afterwards.

18        So now I'm just seeing a summary of all the information

19   I've entered.  I didn't show you every step, but most of

20   them.  And it's showing this is what you've told me so far.

21   This is the movie that we're talking about listing.  And

22   then I can submit down in the lower right.

23   Q    Now, you've been -- when you've been explaining this

24   you've been explaining it, this is the information that I

25   have been putting in.  Exactly who in -- in the actual real
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 1   world would be entering this information through this iTunes
 2   Connect portal that Apple provides?
 3   A    Sorry.  To be clear, although I made this video, that's
 4   why I said "I."  I was doing it in the role of the movie
 5   studio.  That's what they would see when using this tool.
 6   Q    Now, you had, a minute ago, expressed that there were
 7   two ways in which a movie company, a TV show, producer, book
 8   publisher, can provide Apple with this kind of information.
 9   What's the second way?
10   A    The second way I'll show on the next slide.  And it's
11   called the package specification mechanism.  It's an
12   alternative way to say the same thing.
13        Certain studios use the video technique I just showed
14   you; for instance, Sony and Paramount do.  Other studios use
15   this technique where they're able to express the same sort
16   of information, it's just they do it by writing text like
17   I've shown on this slide.
18        And you can see that it also, on the top line,
19   specifies U.S. as the territory.  You say where it's going
20   to be released.  You have start dates for the movie, when it
21   should be released.  Price tiers as well.  So this is just
22   an alternative to the program that I showed you.
23   Q    And does this alternative iTunes package film
24   specification?  Does that -- is that similar to anything
25   that's described in the '053 patent?
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 1   A    Yes.   The '053 patent also includes language that's

 2   similar to this to allow content producers to specify their

 3   rights and pricing.   And I'm showing that on the left of

 4   this slide.   That's the excerpt from the '053 patent.   It's

 5   at Column 13.

 6        And so I've just copied that right out of the patent.

 7   And we can see, for instance, the green part also specifies

 8   the region where the movie is allowed to be sold, and it

 9   also specifies the currency, the fee that is required for

10   the sale of this movie, which corresponds to the mechanism

11   Apple provides on the right.

12   Q    Now, what does Apple do with this information?   Once

13   it's provided by the content owner, by the movie owner, the

14   TV show owner, the book publisher, what does Apple do with

15   this information?

16   A    Whichever way it's -- it's communicated to Apple, Apple

17   takes this information and then encodes it and represents it

18   in their own database.   And I'll be calling this later the

19   MZDatabase where the meta-rights are stored.

20        But they come up with a more compact representation of

21   the required information from that specification so that

22   they can work with it later.

23             THE COURT:   All right.   Let me interrupt for a

24   minute.   We're going to take an opportunity to take a short

25   recess.   The jury's been in the box about an hour and
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 1   40 minutes.

 2             Ladies and gentlemen of the jury, you may leave

 3   your notebooks in your chairs.  Just close them, if you

 4   will.

 5             Don't discuss the case with each other.  Follow my

 6   other instructions.  Use this opportunity to stretch your

 7   legs, get a drink of water, and we'll be back in here

 8   shortly to continue.

 9             You're excused for recess at this time.

10             COURT SECURITY OFFICER:  All rise for the jury.

11             (Jury out.)

12             THE COURT:  The Court stands in recess.

13             (Recess.)

14             (Jury out.)

15             COURT SECURITY OFFICER:  All rise.

16             THE COURT:  Be seated, please.

17             Mr. Thomas, you may return to the podium.

18             MR. THOMAS:  Your Honor, also just by way of

19   explain what might happen next, I think I'm going to be

20   maybe 15 minutes, perhaps more, with -- on direct with

21   Dr. Martin.

22             THE COURT:  All right.

23             MR. THOMAS:  And then I would anticipate -- I

24   don't know, of course, what the cross is, but we would

25   anticipate putting in some deposition testimony to finish
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 1   out the rest of this morning after Dr. Martin is finished,

 2   and I think that will get us right up to lunch.

 3            THE COURT:  We'll see how it goes.

 4            MR. THOMAS:  Okay.

 5            THE COURT:  Thank you for the heads-up.  I would

 6   have appreciated knowing about the animation, but you didn't

 7   inform me, so -- as I said yesterday, if it's not questions

 8   and answers, I want to know about it before it happens.

 9            MR. THOMAS:  Yes, Your Honor.

10            THE COURT:  Okay.  Let's bring in the jury.

11            COURT SECURITY OFFICER:  All rise for the jury.

12            (Jury in.)

13            THE COURT:  Please be seated.

14            All right.  Counsel, you may continue with your

15   direct examination.

16   Q    (By Mr. Thomas) Dr. Martin, when that movie is ready to

17   be uploaded by the owner of the movie at the TV studio,

18   movie publisher -- book publisher, movie studio, what does

19   it come -- how does it get delivered?  What happens to it

20   when it gets to the iTunes Store?

21   A    Using one of those two techniques that I just

22   described, the information has been specified about how the

23   rights should be created.  And the movie itself, the file

24   that has the video in it and the audio in it, has to be

25   delivered separately.
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 1        Once everything is in place, the meta-rights become

 2   effective in Apple's system.  And that's when users can

 3   actually shop for the title and be able to watch a movie.

 4   Q    And does the iTunes Store do anything to the actual

 5   movie file when it receives it?

 6   A    Yes.

 7        After receiving the movie file, Apple then protects the

 8   movie file.  It applies this encryption to ensure that it

 9   really can't be used for anything useful unless someone has

10   appropriate usage rights to go with it.

11   Q    Now, what does the iTunes Store computers do with this

12   information that's been provided to it and creating these

13   meta-rights?  How are those meta-rights involved in an

14   actual request by a customer to get to a movie?

15   A    Those meta-rights are what control Apple's response

16   when a customer tries to buy a movie.  On the next slide, I

17   think I illustrate this.

18        So at the beginning, what I'm going to show is the

19   storage of the meta-rights information, the sort of rights

20   and pricing information in a database, which I'll call the

21   MZDatabases.

22        And we can see here it has some identifier numbers

23   on -- on the left and then some matching prices.  Those are

24   like inventory numbers and matching prices.

25   Q    Now, did you just make up this MZ designation?
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 1   A     No.   That's an actual prefix that Apple uses in its

 2   source code specification of the system.   That's where I got

 3   that.

 4   Q     So, now, walk us through what happens when a customer,

 5   on his or her iPad, makes a request to purchase or rent a

 6   particular title.

 7   A     Let's imagine a customer clicks the purchase button,

 8   sends in the request.   Well, the iTunes server is going to

 9   consult this meta-right storage in order to determine

10   whether it's going to approve the request or not.

11        And the questions that it answers are, one, is this

12   title available in the country that the customer is?

13        Two, has the movie been released yet?

14        Three, what's the price of that movie during the

15   current calendar period?

16        And if all those things line up, if it's all okay, then

17   this iTunes Store server will create this purchase response,

18   something that Dr. Goodrich discussed, also, creates the

19   purchase response, and then sends it back to the customer's

20   iPad device.

21        So with that purchase response, then they'll be able to

22   watch the movie.

23   Q     Now, what is inside this purchase response?   Could you

24   just walk us through, again, what's in that particular --

25   "data structure" is the word I think that was used.
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 1  A     Yes.   One of the exhibits I considered is this one,

 2  which is actually a capture of a purchase response.   But

 3  I've taken some of the pieces of it and shown it on the next

 4  slide to talk about them in particular.

 5  Q    And that document that you just showed us, where was

 6  that from?

 7  A     This is -- this is from a deposition of Apple's

 8  technical witness, Mr. Sean Kelly.

 9       So in this purchase response, I'm showing the top two

10  lines indicating that this particular response relates to a

11  rental.

12       So isRental, yes, it is a rental, and it's a rental of

13  a feature movie.   So together, those form the manner of use

14  indication in this set of -- in this usage right, the manner

15  of use is to watch a rental feature movie as expressed here.

16  Q    Now, where are the conditions, if any, expressed in

17  this particular example of a purchase response?

18  A     They're lower down on the slide.   Here, I've

19  highlighted them now.

20       And so the first condition is the rental duration,

21  which is expressed in seconds.   That's actually the number

22  of seconds in 30 days.

23       And then right below that, it says:   Well, how many

24  seconds is that from now?   Well, you can see it differs by

25  one from the previous line.   That's because, you know, a
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 1   second has passed, so it's going to expire in one fewer

 2   second than you thought, but it's also approximately

 3   30 days.

 4        And then the next two lines concern how long you have

 5   to watch -- actually, the last line concerns how long you

 6   have to watch the movie once you start playing it.  That's

 7   24 hours, again, expressed in seconds.

 8        And this move is labeled PG-13, and that means that the

 9   device won't play the movie unless the device is configured

10   to allow PG-13 playback.

11   Q    Now, does this purchase response include what you were

12   calling the shared state variable as well?

13   A    Yes.  It does contain a state variable used for

14   sharing.

15   Q    Okay.  And have you identified that for us on this

16   slide?

17   A    Yes.

18        The first state variable highlighted here is called the

19   AdamID.  I think Dr. Goodrich mentioned this as well, but

20   it's the inventory identifier for this particular title.

21   And that identifies a location where further information

22   about this title is stored, because by using that number

23   31402, you can look up this other information.

24   Q    And how are the rights shared?  How do you know these

25   rights are shared and that this state variable is shared
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 1   amongst different users?
 2   A    It's easy to see that the right is shared, because just
 3   using the device, you can see that purchasing on one device
 4   shows the same title being available for playback on a
 5   different device associated with the same contact.
 6   Q    Does Apple express that share suggest possible in the
 7   documents that it provides to its customers?
 8   A    Absolutely.  They describe this as well.  And this is
 9   from PX-1005.  It's the help manual that effectively comes
10   with an iPad when you buy it.  And it explains down at the
11   bottom, you bought something on another device.  Just do the
12   following things, and you'll be able to see the title you
13   bought on your other device.  So that's sharing the right.
14   Q    Now, Doctor, did you -- you were here when you heard
15   the preliminary instructions and the discussion about the
16   claims of the patent and the claims defining the rights that
17   the patent owner has.
18        Were you -- you were here for that?
19   A    Yes, sir, I was.
20   Q    Now, have you compared the asserted claim of the '053
21   patent against what you've just described to us is occurring
22   in the Apple system?
23   A    Yes, sir, I have.
24   Q    And have you prepared something that you can help walk
25   us through that?
```

1   A   Yes.

2   On the next sequence of slides, I'm showing on the left

3   the language of the claim they analyzed. That's the full

4   language of it, and there's only one claim. And on the

5   right, I'll be presenting the evidence that's associated

6   with my analysis of the claim language on the left.

7   Q   Now, you said that there's only one claim. You didn't

8   mean that there was only one claim in the patent, did you?

9   A   I did not. I mean that I'm only going to be talking

10 about one claim today.

11 Q   Now, you have here an identification of some of the top

12 level sort of features of this meta-rights patent. Could

13 you just walk us through those and why you're pointing those

14 out?

15 A   Yes.

16   I've associated with these arrows words in the claim of

17 the patent. Those are the actual requirements of the

18 patent. And the concept's on the right.

19   And just to give you an idea of what's coming, first,

20 it's talking about sharing rights. I've already discussed

21 this. It's going to talk about the meta-rights. And that's

22 the meta-right being stored in Apple's iTunes servers that

23 express things like you should sell a movie at the price

24 point of $14.95. That's what the meta-right will do.

25   I've also shown the trusted repository is here as well,

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 1   because in the meta-rights system, the servers that control

 2   the meta-rights and decide whether to create usage rights,

 3   those also have repository protections, the same sort of

 4   integrities and protections that we talked about earlier

 5   today.

 6        And then finally, I'll be discussing state variables as

 7   well.

 8   Q    Okay.  Starting at the top, the first requirement of

 9   this Claim 1 of the '053 patent is a method for sharing

10   rights adapted to be associated with an item.

11        Now, what is an item in the context of this claim

12   language in the '053 patent?

13   A    In this language, "item" refers to an underlying piece

14   of content, a movie or a TV show.  That's the item.

15   Q    Now, what is this sharing of rights referring to in

16   this beginning part of the '053 patent, Claim 1?

17   A    It's referring to any way that the rights can be

18   shared.  And on -- on the right, what I'm just reminding us

19   is that the Apple system does provide a way to share rights

20   through a single iTunes account.

21   Q    So is -- does the Apple system meet this first

22   requirement, this very first requirement of Claim 1?

23   A    Yes.  It does provide a mechanism for sharing.

24   Q    And then moving down to the next requirement,

25   initially, it starts by saying:  Specifying, in a first
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 1  license, using a processor, at least one usage right and at

 2  least one meta-right.

 3      What did you determine when you looked to see whether

 4  that was being done in the Apple system that you've

 5  described to us?

 6  A     What I found is that the Apple system does have

 7  entities that constitute this required first license over on

 8  the left.   Those entities are what I described as the

 9  MZDatabases earlier.

10      More specifically, they're the MZContent, Pricing, and

11  Commerce databases.   That's actually where they are.   And

12  when you look at them, they constitute a first license that

13  does specify these required items on the left.

14  Q     Now, I see that you have some words and definitions

15  here in orange highlighted and in yellow.   Could you explain

16  to us why you've got those there?

17  A     Yes, sir.

18      Those are terms from the Court's definition of claim

19  terms that -- that I'm adhering to.   And I put them there

20  just so we can see the definitions but also to indicate that

21  in my analysis of this claim, I applied each one of these

22  definitions just like Dr. Goodrich did in his analysis.

23  Q     And the next portion of this first paragraph or

24  subparagraph in Claim 1 says:   The usage right and the

25  meta-right include at least one right that is shared among
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 1   one or more users or devices.

 2        Did you find that when you evaluated the Apple systems?

 3   A     Yes, sir.

 4        The right that is shared is the right to play the movie

 5   on the same account.  Since that exists in Apple's system,

 6   this requirement on the left is present and satisfied.

 7   Q     Okay.  Moving to the next requirement of this claim, it

 8   says:  Defining, via the at least one usage right, using a

 9   processor, a manner of use selected from a plurality of

10   permitted manners of use for the item.

11        What did you conclude when you looked to see if that

12   requirement was being performed in the Apple system?

13   A     Remember back when I explained the Apple servers

14   deciding whether to create usage right for a title because

15   someone wants to buy it?  That's when the processor -- those

16   are the servers central processing unit deciding to do that

17   on the basis of the information stored in the MZDatabases,

18   the encoding of the studio's wishes.

19        Okay.  So that's defining, via the one usage right.  I

20   take that back.  Pardon me.  Defining the one usage right a

21   manner of use.

22        Please let me rewind a bit and go to the purchase

23   response that is sent to the iPad.  In that purchase

24   response, it indicates whether it's a rental or not and what

25   kind of license it is.
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 1        Okay.  By indicating those two things, it says whether

 2   it's play rental movie, play purchased movie, or play

 3   DRM-protected music.

 4        And we can see that different licenses can indicate

 5   different things.  IsRental could be either yes, or it could

 6   be no.

 7        So that's a plurality of choices that are possible, and

 8   that's what satisfies this limitation.

 9   Q    Now, this term "license," what is that -- how is that

10   used in the context of the '053 patent and in the context of

11   a digital rights management system?

12   A    There's a definition of license in this case.  A

13   license is an embodiment of usage rights, and I think of it

14   as a license being kind of the wrapper, the representation

15   of the underlying usage right.

16        In addition, the '053 patent says that there have to be

17   two of them in the system.  There's a first license that

18   we've discussed already.  There will also be a second

19   license.  The second license will be the purchased response

20   itself.

21   Q    Okay.  And so what did you conclude with respect to

22   whether this third requirement of Claim 1 is present in the

23   Apple accused system?

24   A    It is present because there's a choice between a number

25   of options.
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 1   Q    Okay.   The next requirement of this claim says:

 2   Defining, via the at least one meta-right, using a

 3   processor, a manner of rights creation for the item.

 4        What did you determine when you looked to see whether

 5   that requirement was present?

 6   A    So this is where I meant to recall the moment of

 7   decision when the servers are saying:  Yes, you customer,

 8   you get the usage rights for your attempted purchase.

 9        And that is using the processor on the server to make

10   that decision and create the usage right, to generate the

11   usage right, if appropriate, and it does so by consulting.

12   It does so via the at least one meta-right expressed

13   originally by the studios.  So that is present in the system

14   as well.

15   Q    And the next requirement of that element says:  Wherein

16   said at least one meta-right is enforceable by a repository

17   and allows said one or more users or devices to create new

18   rights.

19        Is that occurring in the Apple system that you

20   evaluated and just explained to us?

21   A    Yes, sir.

22        The -- the meta-right does allow users or devices to

23   create new rights.  That's the purchase response.  When they

24   click purchase, eventually that creates the right allowing

25   the playback.
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 1        And it's done by a repository.  I have outlined in

 2   green here the iTunes Store servers constitute a repository,

 3   just like Dr. Goodrich explained earlier today, to the same

 4   set of servers.

 5   Q    Okay.  And so what was your conclusion as to whether or

 6   not this element or requirement of the claim is met?

 7   A     This requirement of the claim is also met.

 8   Q     Now, you mentioned the term "repository."  Now, again,

 9   is that the same repository that Dr. Stefik describes in his

10   patents, and is that the same term and the same definition

11   that you're using in respect to this patent?

12   A     Yes.  The meaning of repository in the context of the

13   meta-rights patents is exactly the same as in Dr. Stefik's

14   patents.  Even though Dr. Stefik is not a listed inventor on

15   this patent, it is -- has exactly the same meaning.

16   Q     And the next requirement of the claim says:

17   Associating, using a processor, at least one state variable

18   with at -- with the at least one right in the first license,

19   wherein the at least one state variable identifies a

20   location where a state of rights is tracked.

21        First, Doctor, what did you determine when you looked

22   to see if that requirement is met?  And I see that you've

23   highlighted and underlined a portion of this.  Could you

24   explain to us why?

25   A     Yes, sir.
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 1          Well, I've underlined the part that says:  At least one
 2    state variable identifies a location.
 3          So this is a requirement of this claim.  There has to
 4    be some state variable that identifies a location for this
 5    claim to be infringed.
 6          But there is in Apple's system -- and I'm showing it
 7    here in yellow.  It's this thing that AdamID identifies a
 8    location.  The AdamID is the inventory for the item, and
 9    it's a number like 31402.
10          And as I explained earlier, it does identify a
11    location.  I'm showing an example down below where I'm
12    showing a database that says at location 31402.  If someone
13    tells you that number, 31402, you can go in this MZDatabase
14    and look up and see whether the download has been fulfilled
15    or not.
16          That just means whether the movie has been transmitted
17    to the customer's device or not.  Is it fulfilled or not?
18    So that's how AdamID identifies a location.
19    Q     Now, these AdamIDs were around -- or at least inventory
20    tracking numbers were around before the invention in the
21    '053 patent was conceived, right?
22    A     Certainly, they were.
23    Q     Now, what is it that the '053 patented invention does
24    with this particular identifier, this variable, state
25    variable, that allows the invention to work as described in
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 1   the '053 patent?

 2   A     The idea is to describe a technique for actually

 3   achieving the sharing that we're talking about.  What is the

 4   way that you can do it?

 5         And the '053 patent does this by saying:  Well, look,

 6   if you're going to share information about rights, then what

 7   we're going to suggest you do is have a central location

 8   that is going to keep track of it.  And then everyone who is

 9   sharing the right knows what that location is.

10         So if they need to update information about the right

11   or get information about that right, they just mention the

12   location and they go to that place, and they asks the

13   central authority:  What's the current status?  That's what

14   is taught by '053.

15   Q     And what did you conclude with respect to whether this

16   associating steps of the Claim 1, as I've got it

17   highlighted, is practiced in the Apple system?

18   A     This step is met.  This AdamID is specified in the

19   meta-rights information as well.

20   Q      And the next requirement of this claim says:

21   Generating, in a second license, using a processor, one or

22   more rights based on the meta-right in the first license.

23         Now, what did you conclude when you looked to see

24   whether that requirement is being practiced in the Apple

25   system?
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 1   A    This also goes back to the moment of decision.  A

 2   customer wants to purchase.  Does the system allow it or

 3   not?

 4        Well, if it decides that it's going to allow it, then

 5   it generates in a second license.  And that's the purchase

 6   response.  That's the usage rights.

 7        And it does so on the basis of the instructions in the

 8   first license.  And that's on the -- on the upper part of

 9   this slide.  On the basis of those instructions, it decides

10   to generate the second license.  So this is satisfied in

11   Apple's system, too.

12   Q    And the next portion of this requirement says:  Wherein

13   the one or more rights in the second license includes at

14   least one right that is shared among one or more users or

15   devices.

16        Is that being done in the Apple system?

17   A    Yes, sir.

18        Again, it's the sharing of the titles in the accounts

19   that I previously described.

20   Q    So what was your conclusion with respect to that

21   second-to-last requirement of Claim 1?  Is that present in

22   the Apple system?

23   A    Yes.  The generating element is also present.

24   Q    And the last one is:  Associating at least one state

25   variable with the at least one right that is shared in the
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 1   second license.

 2        Is that being done in the Apple system?

 3   A    Yes, it is.  And the idea here is to -- if you're going

 4   to share through a central location, then everyone needs to

 5   know the name of the location.  That's what's happening

 6   here.  It says:  Associating that variable with the right

 7   that is shared in the second license.  And indeed that is

 8   done.

 9   Q    And then the very last requirement of this claim is:

10   Wherein the at least one state variable that is associated

11   with the second license is based on the at least one state

12   variable that is associated with the first license.

13        Is that being performed in the Apple system?

14   A    Yes, sir, because the variable in the first license on

15   the top of this diagram, that has the original inventory

16   number next to the rules for purchase.

17        And on the bottom, that's where that number comes from

18   when it gets sent down to the iPad.  It also has that same

19   number, so it's based on what was in the first license.

20   That's the idea.

21   Q    So, Dr. Martin, with respect to your analysis and

22   evaluation of infringement of this claim of the '053 patent,

23   what was your conclusion?

24   A    My conclusion is that since all of these claims'

25   requirements have been met in Apple's system, that means
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1   that Apple's iTunes Store servers directly infringe Claim 1

2   of the '053 patent.

3   Q   Thank you, Dr. Martin.

4   MR. THOMAS: I have no further questions for this

5   witness, Your Honor, and I pass the witness.

6   THE COURT: All right. Is there cross-examination

7   by the Defendant?

8   MR. PRITIKIN: There is, Your Honor.

9   THE COURT: You may proceed.

10   MR. PRITIKIN: Thank you.

11   CROSS-EXAMINATION

12 BY MR. PRITIKIN:

13 Q   Good morning, Dr. Martin.

14 A   Good morning.

15 Q   Now, you have testified as an expert in patent

16 infringement cases before this, haven't you?

17 A   That's correct, sir.

18 Q   And, in fact, you've had over a dozen prior depositions

19 in cases?

20 A   That sounds about right, yes, sir.

21 Q   And in all of the cases where you have worked as an

22 expert, you've always been on the Plaintiff's side, right?

23 A   No, sir, that's not true.

24 Q   Well, all the cases where you've testified, you've

25 testified on the Plaintiff's side. Let me qualify that. Is

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 1   that true?

 2   A    I think that's correct, yes.

 3   Q    Okay.  Now, you know that the McKool Smith Law Firm is

 4   representing ContentGuard in this case, and you're working

 5   with them.

 6   A    That's true, sir.

 7   Q    And this is the sixth case in which you have worked

 8   with the McKool Smith Law Firm, correct?

 9   A    I think that's correct.  Different attorneys and

10   different offices for different clients, but, yes, that's

11   correct.

12   Q    Now, for your work on this case, you're being paid at

13   an hourly rate of $525, correct?

14   A    Yes, sir.

15   Q    And how much have you been paid so far?

16   A    I think it is approximately $180,000.

17   Q    How much have you been paid in total by the McKool

18   Smith Law Firm for all the work you've done for them in the

19   past year or two?

20   A    I'm not sure whether I'm allowed to answer that

21   question due to confidentiality with my client.

22             MR. PRITIKIN:  May we approach, Your Honor?

23             THE COURT:  Approach the bench.

24             (Bench conference.)

25             THE COURT:  What's the relevance of this,
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 1   Mr. Pritikin?

 2               MR. PRITIKIN:  Just the bias.

 3               THE COURT:  Well, you said a year or two.  That's

 4   pretty vague.

 5               MR. PRITIKIN:  I can tighten that up.

 6               THE COURT:  Do you know of something that would

 7   prohibit him from answering the question?

 8               MR. THOMAS:  I haven't looked at the

 9   confidentiality agreements and protective orders in those

10   other cases, Your Honor, so I can't say that I do.

11               MR. PRITIKIN:  I think it's a simple point, Your

12   Honor.  I think what he's done is to carve out the amounts

13   from the Google and the Amazon cases, and I don't want to

14   get into the names of those cases, but when he gave the

15   amount, it was lower than what he had testified to, so I

16   think he subtracted that.

17               THE COURT:  Tighten up your question, but let's

18   just move on.

19               MR. PRITIKIN:  I'll just make it a year.

20               (Bench conference concluded.)

21               THE COURT:  All right.  Restate the question,

22   please.

23               MR. PRITIKIN:  Sure.

24   Q    (By Mr. Pritikin) Can you tell us how much you have

25   been paid for the work you've done for matters with the
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 1   McKool Smith Firm in the last two years?

 2   A    I'm having difficulty remembering another client

 3   billing and whether it fits within the two-year period or

 4   not.  I would -- I'd be comfortable in saying that it's not

 5   more than the amount that I've been paid in association with

 6   this ContentGuard case.

 7   Q    All right.

 8   A    So that in addition.

 9   Q    All right.  Now, you have, I think you said, around

10   35 years of professional experience with software?

11   A    Yes, sir.

12   Q    And you've taught college courses in areas related to

13   the ContentGuard patents?  That's what you've said?

14   A    Yes, sir, that's true.

15   Q    But before this lawsuit, you had never heard of

16   ContentGuard, right?

17   A    That sounds correct, yes.

18   Q    And you had never heard of the Stefik patents?

19   A    That's right, sir.

20   Q    Now, the patent you're testifying about is the

21   meta-right, but you'd never heard about that either, had

22   you?

23   A    I think that's correct.

24   Q    Nor were you aware of any products that were ever

25   commercialized by ContentGuard before you began working on
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 1   this case?

 2   A     I think that's also right.

 3             MR. PRITIKIN:  Let's put up AX-8, Mr. Simmons.

 4   Q     (By Mr. Pritikin) And you recognize this as the '053

 5   patent that you've been giving testimony about?

 6   A     Yes, sir, I do.

 7   Q     And it's sometimes referred to as the Nguyen patent,

 8   because that is the first named inventor.

 9         Do you see that?

10   A     Yes, sir, I do.

11   Q     Now, one of the other inventors on this patent is

12   someone by the name of Xin Wang.

13         Do you see that?

14   A     I do, sir.

15   Q     Now, Xin Wang --

16             MR. PRITIKIN:  Let's go to AX-145, Mr. Simmons.

17   Q     (By Mr. Pritikin) This was an article -- you were here

18   when Dr. Stefik testified, weren't you?

19   A     I was.

20   Q     And so you recall that Dr. Stefik was asked questions

21   about this article that was written by some of the people at

22   Xerox, Dr. Ram, Mr. Ta, and Xin Wang?

23         Do you recall that?

24   A     I do recall that, yes, sir.

25   Q     And so Xin Wang, who is one of the named inventors on
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 1   the '053 patent, was also one of the authors on this

 2   article?

 3   A     That's my understanding.

 4   Q     And do you recall that in this article, Xin Wang and

 5   the others had said that the trusted systems are difficult

 6   and may be impossible to build?

 7             MR. PRITIKIN:  Let's take a quick look at Page 4.

 8   A     Thank you.

 9   Q     (By Mr. Pritikin) And down at the bottom point to -- do

10   you see -- very bottom of the page?  They're difficult and

11   maybe impossible to build.  Do you recall testimony by

12   Dr. Stefik about that?

13   A     I do generally recall testimony about this document and

14   whether the trusted system being described here is the

15   trusted system that Dr. Stefik had disclosed in his patents.

16   Q     All right.

17             MR. PRITIKIN:  Let's go back now to the '053

18   patent, which is AX-8.

19   A     Yes.

20   Q     (By Mr. Pritikin) This patent is built on top of the

21   Stefik patents because it too requires trusted systems just

22   like Stefik, correct?

23   A     That's a way to look at it, yes, sir.

24   Q     Well, it's fair to say, isn't it, that this patent --

25   in order to infringe this patent, you have to have the same
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 1  repository requirements, the same usage rights that are

 2  attached or treated as attached as you do in the Stefik

 3  patents, correct?

 4  A    Yes.   Those terms are also used with the same meanings

 5  as in the Stefik patents, possibly different location where

 6  you'd find them, but, yes, the same meanings.

 7  Q    But the point is that if the system doesn't have the

 8  same -- doesn't meet the same requirements for repositories

 9  and usage rights, then it wouldn't infringe the '053 patent

10  either, would it?

11  A    Well, if we look at the claim that's being asserted,

12  Claim 1 of the '053, it does mention both usage rights, and

13  it does mention repository.  So I agree, if those terms

14  aren't present in the system, then that Claim 1 wouldn't be

15  infringed.

16  Q    And you see this patent issued on August 16th, 2011?

17  A    I do, sir.

18  Q    By that date, Apple was already selling movies through

19  the iTunes Store servers; correct?

20  A    Yes.  By the date this patent was issued, that's

21  correct.

22  Q    Now, you have not offered any opinions that Apple

23  copied anything from this patent, have you?

24  A    No, sir.

25  Q    You relied, like Dr. Goodrich, on Dr. Smedley's
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 1  analysis of how Apple's source code works, correct?

 2  A     Yes, sir, I did.

 3  Q     And it would be fair to say that Dr. Smedley is more

 4  familiar with the Apple source code than you are?

 5  A     The source code that is directed to the issues in this

 6  case, I would agree, sir.

 7  Q     You only spent one day reviewing Apple's source code,

 8  correct?

 9  A     That's incorrect, sir.

10  Q     I beg your pardon?

11  A     That's incorrect, sir.

12  Q     You spent one day -- Apple, you understand, made the

13  source code available on source code review machines in San

14  Francisco.

15  A     That's correct.

16  Q     And you spent one day there at that site, correct?

17  A     Yes.  For this analysis, I spent one day at that site.

18  But I also had access to the printed source code and am

19  familiar with the FairPlay source code.

20  Q     By the way, when you were answering the questions on

21  direct, there was a slide that was put up, and I'm not going

22  to put it up again now, but it had logos of a number of big

23  companies on it, and I think you said that you had looked at

24  software of these companies and then had described it to

25  other people.
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 1        Do you recall that testimony?

 2   A    Yes, sir, I do.

 3   Q    Now, what you were talking about was work you did on

 4   lawsuits, right, or potential lawsuits?

 5   A    That's correct.  That it was litigation work along the

 6   lines of what Dr. Smedley is doing in this case in order to

 7   analyze a product by looking at its underlying blueprints

 8   and then explaining exactly how that product works.

 9   Q    But that was your way of saying you were working on

10   lawsuits or potential lawsuits when you said you were

11   explaining it to other people, correct?

12   A    Well, I'd say that there -- they're both true.  I was

13   working on lawsuits or potential lawsuits, and I was looking

14   at the software and explaining it to other people.

15   Q    Now, if Apple's servers are not repositories within the

16   meaning of the Stefik patents, the jury reaches that

17   conclusion, then you'd agree that there's no infringement of

18   the '053 meta-rights patent, correct?

19   A    I would agree, yes, sir.

20   Q    And, likewise, if ContentGuard can't prove that Apple

21   has the usage rights that are attached or treated as

22   attached in the Stefik patents, then there would be no

23   infringement of the meta-rights patent either, correct?

24   A    Correct.  If the usage rights required by the

25   meta-rights patent aren't present in Apple's system, there's
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 1   no infringement by the meta-rights patent.
 2   Q    Now, this patent adds two more requirements beyond
 3   repositories and usage rights.  It also talks about things
 4   called meta-rights and state variables, correct?
 5   A    Yes, sir.
 6   Q    And both usage rights and meta-rights have to be
 7   enforced by repositories?
 8   A    I think I would need to see Claim 1 in order to
 9   establish that usage rights are also recited as enforceable
10   by a repository.  I'm -- I know that meta-rights are, but
11   I'm forgetting whether it says that the usage rights are
12   enforceable by a repository.
13   Q    We've had testimony on that.  Let me limit the question
14   to meta-rights.
15        You'll agree that meta-rights are enforced by
16   repositories?
17   A    Absolutely in the '053, Claim 1.  That's what it says.
18   Q    Now, you've said that Apple infringes when it sells
19   movies and videos, right?
20   A    Yes, sir.
21   Q    But Apple also sells books from the iTunes Store?
22   A    That's true, sir.
23   Q    And you have not said that Apple's electronics book
24   business infringes the meta-rights patent, correct?
25   A    Also correct, sir.
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 1   Q     Nor have you said that the sale of music by Apple would
 2   infringe the meta-rights patent, correct?
 3   A     I have not offered that opinion, that's correct.
 4              MR. PRITIKIN:  Can we put up Slide 6 that you
 5   testified about on the direct examination?
 6   Q     (By Mr. Pritikin) And in the lower left, you -- you
 7   showed the publisher in the case here.  I guess that would
 8   be a music studio; is that right?
 9   A     I was thinking a movie studio.
10   Q     All right.  And you testified about there are legal
11   contracts that the movie studios have with Apple?
12   A     I very briefly mentioned it perhaps, but I -- I'm not
13   sure what you're referring to exactly.
14   Q     Well, let's be clear.  The movie studios have written
15   legal contracts with Apple, correct?
16   A     Yes, sir, they do.
17   Q     And they have requirements in them, correct?
18   A     Certainly.
19   Q     But you are not relying on those legal contracts for
20   any part of your infringement analysis, correct?
21   A     That's correct.
22              MR. PRITIKIN:  And we can take that slide down,
23   Mr. Simmons.
24   Q     (By Mr. Pritikin) Now, one of the problems that the
25   meta-rights patents address is what happens when you have a
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 1   multitiered distribution system, correct?
 2   A    That is among the things it discusses, yes, sir.
 3   Q    And the idea is that a meta-right could be given by,
 4   for example, a publisher to a distributor that would create
 5   usage rights and then give those to customers.  That's the
 6   general idea of the patent, correct?
 7   A    That's one way it can be used, certainly.
 8   Q    Now, in the course of doing the infringement analysis
 9   that you did with respect to Apple, you did not identify any
10   instance of where a movie studio or content provider
11   provided a meta-right to Apple, correct?
12   A    That's not how I described what happened, so that's
13   correct.  I instead described how the studios control the
14   meta-rights that are present in Apple's system.
15   Q    Well, let me see if I can put it another way.  You did
16   not identify a single instance in which a meta-right was
17   created by a studio and then given to Apple?  Can you answer
18   that with a simple yes or no, sir?
19   A    I agree, yes, sir.
20   Q    And, of course, Apple does not give meta-rights to its
21   customers, does it?
22   A    Not in the part of the system that I analyzed, that's
23   correct, sir.
24   Q    So the way you are reading this meta-rights patent,
25   Apple is creating the meta-right itself, correct?
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 1   A     Yes.  At the direction of the movie studios, using the

 2   two techniques we saw, yes, sir.

 3   Q     Apple is creating the meta-right itself the way you

 4   analyze the patent, yes?

 5   A     It specifies the right itself on that basis, yes, sir.

 6   Q     And the way you're reading the patent, Apple both

 7   creates the meta-right itself and exercises the meta-right

 8   itself, correct?

 9   A     Yes, sir, that's correct.

10   Q     Now, what you describe as meta-rights are data that's

11   stored in certain tables of databases on iTunes Servers,

12   correct?

13   A     Yes, sir.

14   Q     And the information that is stored on those databases

15   doesn't limit what Apple can do with the content, does it?

16   Apple put the data there?

17   A     I disagree.

18   Q     Well, you would agree with me that Apple could have its

19   employees change what's in the database, couldn't they?

20   A     Yes.  Apple employees could intervene in the normal

21   operation of the system.  Of course, they can control their

22   equipment.

23             MR. PRITIKIN:  Let's put up Slide 23.

24   Q     (By Mr. Pritikin) And this is another of the slides

25   that you prepared for your testimony here?
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 1   A     Yes, sir.

 2   Q     And you told me a few minutes ago that the meta-rights

 3   are not transferred from the studios to Apple, that Apple

 4   creates the meta-rights, but this slide shows meta-rights

 5   coming from a movie, TV studio, and book publisher.  That's

 6   not what happens in the Apple system, is it, as you've

 7   described it?

 8   A     With respect to this slide, what I'm showing is that

 9   the information controlling the meta-rights, the studios'

10   choices do get sent by the studios to the iTunes servers,

11   that's what I'm showing here.

12   Q     Well, let's be clear on this, Dr. Martin.  You said the

13   meta-right is created at Apple, right?

14   A     The meta-right is specified by Apple on the basis of

15   the studios' wishes.

16   Q     There's no electronic or digital meta-right that is

17   transferred from a movie studio to Apple, is there, sir?

18   A     Correct.  It's not a repository-to-repository transfer

19   of a meta-right, no, sir.

20   Q     You don't think this slide is a little misleading,

21   Dr. Martin?

22   A     I did not intend to make this slide misleading.  I

23   think that I explained that the studios control the

24   information that is stored as the meta-right on Apple

25   server -- servers.
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 1   Q    All right.  Let's talk about state variables.  That's

 2   another feature that's required by the meta-rights patents,

 3   correct?

 4   A    Yes, sir.

 5   Q    And expressly required by the claim?

 6   A    It is.

 7   Q    And what you said during your direct examination is

 8   that something called an AdamID is a state variable,

 9   correct?

10   A    I did.

11   Q    Is that the only state variable that you identify?

12   That was the only one I heard on direct, but I'd like to be

13   clear about this.

14   A    I had a slide where I had several highlighted.  That

15   was one of the state variables.  The others highlighted on

16   that slide were also state variables.

17        In addition, the "fulfilled" field on -- towards the

18   end of my claim walk-through that I discussed in the

19   MZDownloads Database is also a state variable.

20   Q    Well, let's talk about the AdamID, which is the one

21   that you talked about on your direct examination and

22   explained.

23        The AdamID is -- it's a long number, isn't it?

24   A    Yes, sir.

25   Q    And when a new movie is taken in by Apple and it's
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 1   going to be available for distribution, it's assigned an

 2   AdamID, correct?

 3   A    That's correct, sir.

 4   Q    And that never changes, does it?

 5   A    That sounds correct.

 6   Q    It's assigned to it because then you have a permanent

 7   name or reference for that movie, correct?

 8   A    Yes.  As I called it, an inventory identifier.

 9   Q    Now, you think the AdamID is a state variable, but the

10   number doesn't change, correct?

11   A    That's correct.

12   Q    So in your mind, something that doesn't change can be a

13   variable?

14   A    Absolutely.  That's what it means in computing.

15            MR. PRITIKIN:  No further questions, Your Honor.

16   I pass the witness.

17            THE COURT:  Redirect?

18            MR. THOMAS:  Yes, Your Honor.

19            THE COURT:  You may proceed.

20            MR. THOMAS:  All right.  If I might have that

21   article up, the Xin -- I believe it was called, or the Xin,

22   whatever.  It was an Apple exhibit.  It was the first one

23   that Mr. Pritikin had up.

24            And the one where we went to Page 4 and

25   Footnote 2.
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 1                      REDIRECT EXAMINATION

 2    BY MR. THOMAS:

 3    Q    You see where Mr. -- you recall where Mr. Pritikin

 4    pointed you to this statement?  It says:  They are difficult

 5    and may be impossible to build.

 6              MR. THOMAS:  Could we go back to the first page of

 7    this article, please?

 8    Q    (By Mr. Thomas) What is the date that this article was

 9    written?

10    A    It's labeled May 30th, 1997.

11    Q    Do you think something in the world of computers, sir,

12    that was difficult, maybe even impossible to build back in

13    1997, you think that applies today?

14    A    Things change rapidly in computing, so not necessarily.

15    Q    Do you think it's fair to use a statement made on

16    May 30th of 1997 to try to characterize what might be

17    possible or difficult or not difficult to build with today's

18    technology?

19    A    I would say it's, at best, speculative.

20    Q    Now, also, sir, you were asked some questions about

21    this idea of a state variable.

22         Do you recall that?

23    A    I do.

24    Q    And do you recall the Court actually provided us with a

25    definition of that state variable?
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 1          Do you recall that?

 2    A     Yes, sir, I do.

 3    Q     And that definition included that it could identify a

 4    location.

 5          Do you recall that?

 6    A     Yes, sir.  I testified about that as well.

 7    Q     Okay.  Now, does this AdamID, what you pointed to as

 8    this inventory tracking number, is that identifying a

 9    location where something is tracked?

10    A     Yes.  It identifies this central place where the

11    information is being tracked.  It doesn't make sense to

12    change where the information is being tracked over time.

13    That would defeat the purpose of having a central place that

14    tracks information related to sharing.

15    Q     So does this AdamID meet the Court's definition of

16    state variable insofar as identifies a location where

17    information is tracked?

18    A     Yes, sir, it does.

19             MR. THOMAS:  I have no further questions, Your

20    Honor.  I pass the witness.

21             THE COURT:  Additional cross-examination?

22             MR. PRITIKIN:  No, sir.

23             THE COURT:  All right.  Dr. Martin, you may step

24    down.

25             THE WITNESS:  Thank you, Your Honor.
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 1                    THE COURT:  Plaintiff, call your next witness.

 2                    MS. ENGELMANN:  Your Honor, as Mr. Thomas had

 3   asked you before, we'd like to call Jeff Robbin, Apple's

 4   vice president of iTunes Store engineering by video.

 5                    THE COURT:  All right.  You may proceed with the

 6   witness by deposition.

 7                    MS. ENGELMANN:  Okay.  And just as an instruction,

 8   Jeff Robbin is Apple's vice president of Apple engineering,

 9   and we have about 27 minutes.

10                    THE COURT:  All right.  Let's proceed with the

11   deposition.

12                    (Video clip playing.)

13                    QUESTION:  Tell us for the record what your

14   current position at Apple.

15                    ANSWER:  Vice president of Apple's iTunes

16   engineering.

17                    QUESTION:  How long have you held that position?

18                    ANSWER:  Probably about -- I'm not exactly sure I

19   became vice president.  I've been at Apple doing iTunes

20   since 2000.

21                    QUESTION:  And when you say iTunes, what do you

22   mean by that what does that include in your way of thinking?

23                    ANSWER:  ITunes started out as MP3 player software

24   for the Mac.  That is where it was first introduced as in

25   2000.  It became an online store inside the iTunes desktop
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 1  application, and it includes client servers software.

 2           QUESTION:  And, again, I'm going to try to get

 3  through this quickly.  I just need a little bit of your

 4  background -- educational background, if you could, what

 5  your work history was before you arrived at Microsoft.  I

 6  don't need a lot of detail, but if you could just give me

 7  some flavor for that.

 8           ANSWER:  I've never been at Microsoft.

 9           QUESTION:  I'm sorry.  I meant Apple.

10           ANSWER:  I went to the University of Iowa for an

11  undergrad degree in computer science with a minor in

12  business.  I went to the University of Illinois where I got

13  an MBA.  I had an internship at Apple while I was at the

14  University of Illinois.  And I came back full-time to work

15  at Apple in 1993.

16           Let's see, I left Apple in the fall of '97 for a

17  few years, and I came back in 2000 when my company was

18  acquired to create iTunes.

19           QUESTION:  What product did Sound Step start out

20  trying to develop?

21           ANSWER:  We created -- well, we started out trying

22  to create an MP3 cable to connect third-party MP3 players to

23  the Macintosh, but it ended up changing, and we turned it

24  into Sound Jam, which was an MP3 player for the Mac, sold

25  third party through a distributor whose name was Casady &
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 1   Greene.

 2              QUESTION:   And you said your company was acquired

 3   by Apple in around 2000; is that correct?

 4              ANSWER:   September.

 5              QUESTION:   And was Sound Jam, the product,

 6   incorporated into any of Apple's product offerings?

 7              ANSWER:   Well, Sound Jam itself wasn't -- the code

 8   that went into making Sound Jam what it was, was the basis

 9   for developing iTunes on the desktop.

10              QUESTION:   Did Sound Jam include any DRM

11   functionality?

12              ANSWER:   I don't think so.   I don't think so.

13              QUESTION:   Was -- had you considered -- again,

14   this was before Apple acquired Sound Jam, had you considered

15   whether or not your Sound Jam product should incorporate any

16   kind of DRM functionality?

17              ANSWER:   No.

18              QUESTION:   When was the first time that you

19   considered any DRM functionality for anything in the iTunes

20   ecosystem?

21              ANSWER:   It would probably be during the

22   conversations with record labels when contemplating the

23   iTunes Store -- the iTunes Music Store.

24              QUESTION:   Was there -- at some point after Apple

25   acquired your company, Sound Step, was there the
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1   implementation of any DRM functionality into your Sound Jam

2   product?

3   ANSWER: No.

4   QUESTION: Was there the incorporation of DRM

5   functionality into any iTunes client side software?

6   ANSWER: We incorporated FairPlay into iTunes when

7   we launched the iTunes Music Store.

8   QUESTION: Was any part of the Sound Jam software

9   used in the client side software for iTunes?

10   ANSWER: Yes.

11   QUESTION: Okay. What parts?

12   ANSWER: It was the foundation for playback,

13   encoding of music from CDs. It was the foundation for the

14   library. It had -- it had the -- some of the user interface

15   concepts were -- were there.

16   QUESTION: Was Sound Jam your concept?

17   ANSWER: Yes.

18   QUESTION: What was the business strategy of Apple

19   behind the DRM that was included in the iTunes Store?

20   ANSWER: Well, for us, we did what we needed to do

21   in order to create the store. So the product we were

22   creating was the iTunes Music Store, and that was all about

23   the best product for the customer.

24   We tend to think about the customer first. And

25   DRM was a necessary technology to create in order to be able

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 1  to satisfy the requirements that the content providers had

 2  as part of the negotiations.

 3         QUESTION:  And that DRM that the content providers

 4  were asking Apple to include, did that end up being

 5  FairPlay?

 6         ANSWER:  Yeah.  We implemented FairPlay in order

 7  to satisfy those requirements.

 8         QUESTION:  Okay.  Was there one thing in

 9  particular that Apple implemented that you believed helped

10  reduce the occurrence of hacks into FairPlay?

11         ANSWER:  There was no -- there was never just one

12  thing.  Dealing with DRM hacks and FairPlay hacks is kind of

13  an ongoing game of cat and mouse and staying ahead of what

14  the hacks are.  And the hacks are a variety of different

15  types and styles, and so there was no one thing because

16  there were all sorts of different issues.

17         QUESTION:  You hired Mr. Farrugia, correct?

18         ANSWER:  Yes.

19         QUESTION:  And you hired Mr. Farrugia back shortly

20  after the first iTunes Store was launched; is that correct?

21         ANSWER:  I don't remember exactly when it was.

22  2004, 2005, something like that.

23         QUESTION:  But you hired Mr. Farrugia because you

24  felt he had an expertise in security and particularly ways

25  to implement DRM in a secured fashion; is that correct?
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 1              ANSWER:  We hired Augustin to make FairPlay more

 2   secure.

 3              QUESTION:  And so you hired Mr. Augustin to help

 4   beef up your DRM for -- for the iTunes Store, correct?

 5              ANSWER:  We hired Augustin -- Mr. Farrugia in

 6   order to make FairPlay more secure.

 7              QUESTION:  The iTunes -- first iTunes desktop,

 8   what we'll call client side software -- is that fair to call

 9   it client side if we call it a desktop --

10              ANSWER:  Yes.

11              QUESTION:  -- the iTunes desktop?

12              The first iTunes desktop came out in about 2001;

13   is that correct?

14              ANSWER:  Yes.

15              QUESTION:  And did that have any DRM protection in

16   it?

17              ANSWER:  No.

18              QUESTION:  Did it have FairPlay in it?

19              ANSWER:  No.

20              QUESTION:  And Apple introduced the iPod in about

21   October of 2001, correct?

22              ANSWER:  Yes.

23              QUESTION:  Did the iPod have any client side

24   FairPlay software on it when it was first introduced?

25              ANSWER:  I think of the iPods as being device side
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 1  for that point of view.  But, no, FairPlay was not created

 2  until we introduced the iTunes Music Store in 2003.

 3            QUESTION:  Was there ever any consideration at

 4  Apple that you recall when the iTunes desktop client was

 5  first released to including any DRM protection for that

 6  functionality?

 7            ANSWER:  No.

 8            QUESTION:  You said that the DRM protection was

 9  added by way of FairPlay when the iTunes Music Store was

10  first introduced in about 2003, correct?

11            ANSWER:  Yes.

12            QUESTION:  Okay.  And isn't it true that at that

13  time, piracy of music was rampant on the Internet?

14            ANSWER:  I think piracy was pretty prevalent back

15  then, yes.

16            QUESTION:  In fact, you said it was rampant and

17  not just prevalent, correct?

18            ANSWER:  If you're looking at what I said, then

19  yes.  I don't remember exactly what I said.

20            QUESTION:  Do you think "rampant" to describe the

21  amount of piracy going for digital music back in 2003 is an

22  accurate description?

23            ANSWER:  Yes.

24            QUESTION:  Now, the -- this first implementation

25  of the Apple DRM, as embodied in the FairPlay software, that
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 1   included usage rules, correct?
 2            ANSWER:   The usage rules were actually only in a
 3   contract.   FairPlay doesn't have any usage rules.
 4            QUESTION:   So the FairPlay software then was
 5   designed and written so as to implement these usage rules,
 6   correct?
 7            ANSWER:   I would say that the FairPlay software
 8   enforced the content usage rules from the contracts.
 9            QUESTION:   And Apple was required to include some
10   kind of DRM protection in its iTunes Music Store when it
11   first launched required by the labels, correct?
12            ANSWER:   I mean, I think, technically, we were
13   required to enforce the content usage rules, and FairPlay
14   was the way we did that.
15            QUESTION:   Was there any way to enforce those
16   content usage rules that were spelled out in the contracts
17   with the content owners other than a software DRM scheme?
18            THE REPORTER:   Scheme?
19            THE ATTORNEY:   Scheme.
20            ANSWER:   I'm not sure if we could come up with
21   another way to enforce them or not.   We chose to do it using
22   FairPlay.
23            QUESTION:   Did you consider anything other than
24   FairPlay as a way to enforce the content usage rules that
25   were specified in the contracts with the content owners?
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 1                ANSWER:  When we -- when we first did it, we

 2   didn't even have FairPlay, so we created a solution that we

 3   then just named FairPlay.  So we didn't -- that's what we

 4   came up with.

 5                QUESTION:  You only considered the software

 6   implementation of FairPlay as a way to implement the usage

 7   rules, correct?

 8                ANSWER:  As a way to implement the content usage

 9   rules that were in the contract.

10                QUESTION:  From the first instance that the iTunes

11   Store was released, did hackers attempt to break the DRM

12   that was built into FairPlay?

13                ANSWER:  Hackers attempted to break FairPlay.

14                QUESTION:  From the very beginning?

15                ANSWER:  From the very beginning.

16                QUESTION:  And Apple attempted to monitor as many

17   of those hacks as it could find, correct?

18                ANSWER:  Yes.

19                QUESTION:  And in doing so, Apple attempted to

20   identify how the DRM built into FairPlay was being

21   compromised, correct?

22                ANSWER:  We attempted to figure out how FairPlay

23   was being compromised.

24                QUESTION:  You attempted to see how those hackers

25   were trying to modify Apple's DRM or trying to circumvent
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 1  it, correct?
 2          ANSWER:  I would say that we were trying to figure
 3  out how the hack worked and what they were doing in order to
 4  try to figure out how to make FairPlay better.
 5          QUESTION:  So when you monitored all the hacks
 6  that were attempted as a way of compromising FairPlay, you
 7  were trying to find out where those hackers were modifying
 8  the Apple DRM or trying to circumvent it, correct?
 9          ANSWER:  We don't know, and I can't say about what
10  each hack did, whether it was modifying FairPlay or
11  circumventing FairPlay or some other way of violating the
12  content usage rules in the contracts.
13          QUESTION:  But if you could turn to Page 895 of
14  what we've marked as Robbin's Exhibit 2.  And it's in the
15  upper right-hand corner, the page numbers.  And this is
16  double-sided.  Trying to save the trees.
17          All right.  Do you recognize this testimony as
18  being your testimony that you provided under oath about
19  three months ago?
20          ANSWER:  Yes.
21          QUESTION:  You were under oath at that point,
22  correct?
23          ANSWER:  Yes.
24          QUESTION:  And you tried to tell the truth as best
25  you could during the course of that testimony, correct?
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 1                ANSWER:  Yes.

 2                QUESTION:  If you could turn to Page 921.

 3                On that page are Lines 15 and 16.  Did you not

 4   testify:  We monitor all the hacks that we can find and see

 5   where they are modifying our DRM or trying to circumvent it.

 6                That's what you said, right?

 7                ANSWER:  Yes.

 8                QUESTION:  And when you said "modifying our DRM,"

 9   you meant modifying the DRM in the FairPlay software,

10   correct?

11                ANSWER:  I meant modifying FairPlay.

12                QUESTION:  Because FairPlay and DRM are one and

13   the same thing in your mind?

14                ANSWER:  No.  FairPlay is a DRM.

15                QUESTION:  And it is true that Apple tried to

16   monitor all the hacks of FairPlay that they could find and

17   try to figure out where those hackers were trying to modify

18   or circumvent FairPlay, correct?

19                ANSWER:  Yes.

20                QUESTION:  And in particular, the DRM

21   implementation of FairPlay, correct?

22                ANSWER:  The implementation of FairPlay.

23                QUESTION:  And FairPlay implements Apple's DRM for

24   the iTunes Store, correct?

25                ANSWER:  Yes.
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 1                  QUESTION:   And your job at Apple was to secure the

 2   DRM that was used on the iTunes Store, correct?

 3                  ANSWER:   One of my jobs.

 4                  QUESTION:   So the encryption is a form of DRM

 5   protection in FairPlay?

 6                  ANSWER:   No.   FairPlay, which, in itself, is a DRM

 7   system, uses encryption as one of its methods for

 8   protection, and that encryption is applied to the files.

 9                  QUESTION:   And that encryption is part of the DRM

10   scheme in FairPlay, correct?

11                  ANSWER:   FairPlay uses encryption.

12                  QUESTION:   To perform the digital rights

13   management functions of FairPlay, correct?

14                  ANSWER:   To encrypt the files.

15                  QUESTION:   For purposes of implementing the DRM

16   that FairPlay was intended to impart, correct?

17                  ANSWER:   In order to enforce the content usage

18   rules, FairPlay has to encrypt the files.

19                  QUESTION:   Now, Apple took FairPlay and its

20   implementation of digital rights management very seriously,

21   correct?

22                  ANSWER:   Yes.

23                  QUESTION:   And, in fact, you wanted FairPlay --

24   Apple wanted FairPlay to be a gold standard for DRM

25   protection for digital content, correct?
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 1              ANSWER:  Yes.

 2              QUESTION:  Was Apple ever asked to license its

 3   FairPlay software to any third parties?

 4              ANSWER:  Probably.

 5              QUESTION:  Are you aware of any such request to

 6   license the FairPlay DRM software?

 7              ANSWER:  I can't remember them.

 8              QUESTION:  Are you aware of any instances where

 9   Apple actually did license its FairPlay DRM software to any

10   third parties?

11              ANSWER:  No, sir.

12              QUESTION:  Now, isn't true, sir, that for Apple to

13   have had an online music store, Apple had to have digital

14   rights management software built into that music store?

15              ANSWER:  Well, we knew we had to enforce the

16   content usage rules that the content providers wanted.

17              QUESTION:  It's true, sir, isn't it, that in order

18   to have an online music store, Apple had to have a DRM and a

19   DRM had to be secure, correct?

20              ANSWER:  We definitely had to have the content

21   usage rules enforced, and when we first did the music store,

22   it was about keeping honest people honest, and so the DRM

23   was not as secure as we ended up making it over time.

24              QUESTION:  Okay.  If you could turn to Page 927 in

25   your testimony from some three months ago.
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 1                  On Lines 3 and 4, you testified that:  In order to

 2    have a music store, we had to have a DRM and the DRM had to

 3    be secure.

 4                  Did I read that correctly, sir?

 5                  ANSWER:  Yes.

 6                  QUESTION:  And that's what you testified to under

 7    oath?

 8                  ANSWER:  Yes.

 9                  QUESTION:  Three months ago, correct?

10                  ANSWER:  Yes.

11                  QUESTION:  And you believed it when you said it,

12    right?

13                  ANSWER:  Still do.

14                  QUESTION:  How about the expression "Keybag"?

15    Have you heard that used in the context of FairPlay?

16                  ANSWER:  Yes.

17                  QUESTION:  What does that term mean to you in the

18    context of FairPlay?

19                  ANSWER:  Well, specifically with FairPlay, the

20    Keybag is a place where the keys are stored on the client.

21    It probably means more than that, but you'd have to get GP

22    to talk about it.

23                  QUESTION:  And when you say "the keys," you mean

24    the decryption keys that allow the client's device to

25    decrypt the content that's downloaded to it, correct?
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 1              ANSWER:  It's more complicated than that.  There's
 2   chains of keys that do that.  I -- so you have to ask GP for
 3   more details.
 4              QUESTION:  Did Mr. Jobs keep track of instances
 5   where the DRM implemented in FairPlay was being hacked?
 6              ANSWER:  I don't know what he kept track of.
 7              QUESTION:  Did he ever send you messages or notes
 8   informing you or asking you questions about alleged hacks of
 9   the DRM in FairPlay?
10              ANSWER:  It would be a question about a hack of
11   FairPlay.
12              QUESTION:  And Mr. Jobs would send you emails
13   asking you about things that were modifying the DRM?
14              ANSWER:  If he read about a hack online, he might
15   forward me an article about it.
16              QUESTION:  He did that all the time, right?
17              ANSWER:  Did it often.
18              QUESTION:  Did it all the time, didn't he?
19              ANSWER:  Sure.
20              QUESTION:  And after Apple put its online store,
21   the iTunes Store, or released it, put it out there for
22   people to use along with the FairPlay DRM protection, Apple
23   was, in its normal course of business, attempting to improve
24   the DRM capabilities of FairPlay all the time, right?
25              ANSWER:  We were always trying to make FairPlay
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 1   more secure.
 2                QUESTION:   And it was just the normal course of
 3   business at Apple to improve the FairPlay DRM, correct?
 4                ANSWER:   It was the normal course of business to
 5   make FairPlay more secure.
 6                QUESTION:   And that meant improving the DRM in
 7   FairPlay, correct?
 8                ANSWER:   It was improving the security of the DRM
 9   in FairPlay -- or of FairPlay.
10                QUESTION:   And Apple had to have DRM protection in
11   order to have an iTunes Store at all, correct?
12                ANSWER:   We had implemented the content usage
13   rules in the contracts.
14                QUESTION:   If you could turn to Page 963 of your
15   testimony from three months ago.
16                And starting at Line 19 of that testimony on
17   Page 963, you stated:   We were required by the record labels
18   to -- to have FairPlay be protected, period.   And we had
19   hack after hack after hack that broke that.   And so for us,
20   we were just evolving the DRM.
21                Then you were asked:   For the record labels,
22   right?
23                And you answered:   In order to have an iTunes
24   Music Store at all.
25                That's what you said, right?
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 1              ANSWER:  Yes.

 2              QUESTION:  And as you testified at Line 24,

 3   Page 963 of your testimony last year:  That was in order to

 4   have an iTunes Music Store at all.

 5              Did I read that correctly?

 6              ANSWER:  You read that correctly.

 7              QUESTION:  And that was your testimony, right?

 8              ANSWER:  This was my testimony.

 9              QUESTION:  What did -- if anything, what did Apple

10   do to confirm to a client side device that the update to

11   iTunes that it was receiving, including an update to

12   FairPlay, was coming from Apple and not from some other

13   third party?

14              ANSWER:  Updates to FairPlay, if they came from

15   Apple, just were downloads from our servers that got

16   installed.  But there's nothing that stopped a user on a

17   desktop computer from installing any piece of software they

18   wanted.

19              QUESTION:  Is there any sort of confirmation built

20   into iTunes or the operating system on which iTunes runs on

21   the client devices that confirms that an update to the

22   operating system or to FairPlay is coming from Apple?

23              ANSWER:  When the -- when the music store

24   launched, the iTunes updates just were downloaded files that

25   ran in installer.  I think they verified themselves to be
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 1   correct within themselves, but somebody could make another

 2   version that modified that.  Later on, the operating system

 3   verifies that software packages that come from Apple were

 4   signed by Apple.

 5           QUESTION:  When you say signed by Apple, that the

 6   updates are signed by Apple, what do you mean in the context

 7   of computer programming languages?

 8           ANSWER:  I just mean that using a digital

 9   signature that Apple has on its servers that the client can

10   then verify that that came from Apple.  Unfortunately, that

11   doesn't prevent somebody from installing software on the

12   computer anyway that would change it.

13           QUESTION:  Do the Apple software update servers

14   that send out updates to the FairPlay software, do they

15   issue certificates to themselves?

16           ANSWER:  I don't believe so.

17           QUESTION:  Do you believe they obtain certificates

18   from other third-party certificate authorities?

19           ANSWER:  Yes.

20           QUESTION:  Isn't it true, sir, that for Apple to

21   get rights to things like movies, TV shows, and books, Apple

22   had to be able to show the content owners that they have a

23   really secure DRM?

24           ANSWER:  Yes.

25           QUESTION:  And it did so by showing those content
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 1  owners that Apple had really secure DRM, right?

 2             ANSWER:   Among a lot of other things, we had to

 3  show that FairPlay was very secure.

 4             QUESTION:   And why would Mr. Jobs care if the DRM

 5  in FairPlay was hacked?

 6             ANSWER:   So if FairPlay was hacked, then that

 7  shows that we have a security problem, and we've got an

 8  agreement with the content owners that we would keep the

 9  content protected, so we would need to fix it.

10             QUESTION:   And, in fact, if you weren't able to

11  fix the hacks into your DRM, Apple wasn't going to have

12  content to sell over its iTunes Store, correct?

13             ANSWER:   Yes.   If we -- if -- if FairPlay got

14  hacked and we couldn't fix it, then the content rights

15  holders had the option of removing their content from the

16  iTunes Store.

17             QUESTION:   So if the DRM in FairPlay was not

18  secure, the iTunes Store would not have been successful,

19  correct?

20             ANSWER:   If -- well, FairPlay was not secure many

21  times.   If there was widespread abuse of it, then that had

22  an implication for the content owners.

23             QUESTION:   So the DRM that Apple implemented

24  couldn't be corrected or fixed to overcome a hack that would

25  have had very severe and dire consequences on the commercial
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 1 viability of the iTunes Store, correct?

 2   ANSWER: If FairPlay was hacked and we couldn't

 3 fix it, it could have had severe consequences.

 4   QUESTION: FairPlay is the -- Apple's version of

 5 DRM, correct?

 6   ANSWER: FairPlay is the DRM that we built to

 7 enforce the content usage rules from the contracts with the

 8 record labels.

 9   QUESTION: And you described it as a very

10 complicated system, correct?

11   ANSWER: Yes.

12   QUESTION: Do you believe it's true that FairPlay

13 and its scheme of DRM was created to prevent the music from

14 being illegally copied?

15   ANSWER: I think that that was one of the goals of

16 having the content usage rules that the record labels

17 created.   I think that FairPlay was created to enforce those

18 content usage rules from the contracts by the labels.

19   QUESTION: Do you think that the iTunes Store has

20 been a profitable enterprise for Apple?

21   ANSWER: Yes.

22   QUESTION: Did it exceed your expectations?

23   ANSWER: Yes.

24   (End of video clip.)

25   MS. ENGELMANN: Your Honor, that concludes the

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 1   deposition testimony by Mr. Robbin.  We have three others

 2   that are about 13, 12 minutes, and 9 minutes.  So however

 3   you want to proceed.

 4              THE COURT:  Let's proceed with the next one at

 5   this time.

 6              MS. ENGELMANN:  Okay.  Then ContentGuard calls

 7   Lionel Gentil, who is Apple's site reliability engineering

 8   manager.  The deposition testimony will be read by our

 9   attorney, Eric Hansen.

10              THE COURT:  All right.  Ladies and gentlemen, in

11   this case, there's no video recording of the deposition, so

12   this gentleman will be playing the part of the person that

13   answered the questions.  And the questions will be asked and

14   answered orally rather than you seeing a video.

15              MS. ENGELMANN:  Thank you, Your Honor.

16              THE COURT:  All right.  Ms. Engelmann, you may

17   proceed.

18              (Deposition of Lionel Gentil read.)

19              QUESTION:  Good morning, sir.  Could you please

20   state your complete name for the record?

21              ANSWER:  My name is Lionel Gentil.

22              QUESTION:  What is your job title at Apple?

23              ANSWER:  I am a site reliability engineering

24   manager.

25              QUESTION:  So is it accurate to say you've been at
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 1   Apple for four years?

 2            ANSWER:  Yes.

 3            QUESTION:  And where were you working before you

 4   came to Apple?

 5            ANSWER:  I was working for Akamai.

 6            QUESTION:  Was Apple your primary responsibility

 7   from 2008 until you left Akamai to go to Apple?

 8            ANSWER:  The biggest, yes.

 9            QUESTION:  What is a content delivery network?

10            ANSWER:  The content delivery network is a network

11   that is all over the world to reach the end users where they

12   are.

13            If you -- if I take a real life example, you go

14   to -- if you live in a place where there is no supermarket,

15   with no supermarket, it is an hour for you to drive to the

16   supermarket.  It is a drag, okay?  So -- and it's slow and

17   it's painful.

18            And you have a big truck because, you know, when

19   you go, you only want to go once because it's such a drag to

20   go to the supermarket.

21            The idea of Akamai is to say:  You know what?

22   We're going to put a lot of small groceries next to you so

23   it's five minutes away from your place.  It's fast.  It's

24   convenient.  You just go for a gallon of milk.

25            The idea of Akamai is that not one web server is
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 1   big enough to serve the world.  In the latency between the
 2   big supermarket, this big server and the customer is a
 3   problem to do business.
 4             So let's duplicate this content all over the world
 5   so that we are pushing the content next to the user so it's
 6   always fast and snappy and the supermarket doesn't have to
 7   be really, really, really big to accept all -- all of these
 8   customers coming from 200-mile radius because the doors are
 9   not able to fit everybody at the same time.
10             So just create some small groceries around it and
11   just for web technologies to avoid a bottleneck on the
12   creator of the content; in our case, Apple.
13             QUESTION:  Does Akamai call those Edge servers?
14             ANSWER:  Yes.
15             QUESTION:  And does Apple use the Edge servers as
16   part of its content delivery network?
17             ANSWER:  Yes.  Edge servers is a generic term.
18   Every CDN uses this terminology because it's at the edge.
19             QUESTION:  Are the iTunes music assets that are
20   stored on Akamai NetStorage also stored at Apple servers?
21             ANSWER:  Yes.
22             QUESTION:  Is there any iTunes content that is
23   stored only on Akamai NetStorage?
24             ANSWER:  No.
25             QUESTION:  Is an original copy of all of the
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 1   assets of the iTunes Store stored on the Apple servers?

 2            ANSWER:  I will try to rephrase your question.

 3            QUESTION:  Okay.

 4            ANSWER:  Is there a source of truth at Apple that

 5   owns all of what we have for sale on the store?

 6            QUESTION:  Yes.

 7            ANSWER:  Yes.

 8            QUESTION:  And would that be at the Apple servers

 9   in either Newark or Maiden?

10            ANSWER:  Yes.

11            QUESTION:  Do you have a sense as to what the

12   volume is of the amount of NetStorage that Apple uses at

13   Akamai for iTunes Store assets?

14            ANSWER:  Last time I checked, which was maybe six

15   months ago, I think that we were using 1.5 petabyte.

16            QUESTION:  P-e-t-a?

17            ANSWER:  P-e-t-a-b-y-t-e.

18            QUESTION:  Is that 10 to the 15th?

19            ANSWER:  10 to the 15th.

20            QUESTION:  Is peta a petabyte to the 15th?

21            ANSWER:  Oh, peta is 1500 tera, which is 1.5

22   million giga.

23            QUESTION:  Now, let me see if I can phrase this

24   correctly.  Is data stored on the Akamai Edge servers?

25            ANSWER:  "Stored" is a loaded term.  Cached, yes.
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 1              QUESTION:   And when you distinguish between

 2   "stored" and "cached," what distinction are you making?

 3              ANSWER:   Stored means that you can go -- means

 4   that you can go on a file system and see a file named

 5   tvshow1, MP4.

 6              Cached means that you have what we call a queue,

 7   which contains bytes, random bytes, that we get from Apple

 8   in our case.   And then when a resource is being passed up to

 9   the queue, you go inside the queue, you pull it up from

10   there, and you push it.

11              No user can go easily and find this tvshow1 when

12   it's in the queue, when it's cached.   When it's stored, then

13   you have your tree of directories and you find what you

14   want.   This is not the case on an Edge server.

15              QUESTION:   Then how can a user retrieve an asset

16   using an Edge server?

17              ANSWER:   By making an HTTP request to the Edge

18   server.

19              QUESTION:   And that would be with a URL provided

20   by Apple?

21              ANSWER:   Yes.

22              QUESTION:   Where are the Akamai Edge servers that

23   distribute the iTunes Store content located?

24              ANSWER:   All over the world.

25              QUESTION:   So if I'm an Apple user, which I am,
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 1 and I'm using the iTunes Store to purchase a music asset, a

 2 song, I select the song. I send a purchase request to the

 3 iTunes Store.

 4   What does the iTunes Store do with that purchase

 5 request, assuming I haven't purchased it before, to

 6 Akamai's -- the request?

 7   ANSWER: So when you click on "buy," which is what

 8 you did in your example, there's no Akamai in the loop. You

 9 go straight to our servers for security obvious reasons.

10 There's no Akamai in this workflow.

11   And the response you get from us, you get various

12 things. In those things you're getting a key to download

13 and a URL to download. This URL is domain apple.com, but it

14 is aliased, A-L-A-A...

15   And so you get this URL that points you to the

16 Akamai server. And when you ask for the content, you are

17 also sending this key in the URL request.

18   Akamai says: Okay. You want this asset. Maybe I

19 have it on cache, in my cache queue; maybe I don't. I'm

20 going to get it for you anyway. Doesn't matter whether it's

21 in storage, Apple, I'm going to serve it to you if your

22 key -- your download key, as we call it, is valid.

23   So you go to Apple to then go to the CDN Akamai.

24   QUESTION: How -- where do the patches come from?

25   ANSWER: From Oracle.

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 1                QUESTION:  No.  I'm not talking about the

 2  operating system patches; I'm talking about on the Apple

 3  framework like the MZ --

 4                ANSWER:  Oh.

 5                QUESTION:  -- store itself.

 6                ANSWER:  Oh, they come from SVN, subversion

 7  number.  Every developer checks out the code from SVN to

 8  their local machine so they have all the source code in

 9  Java.  They patch, which means change the code, and they

10  commit the code back to SVN.

11                And then there's a building mechanism that takes

12  all of the source code, compiles it, and creates what we

13  called the build.  And then we deploy the build on all our

14  servers that will execute some Java command to create the

15  Java machine for MZBuy, MZFinance.

16                And if there is a small patch, which is what

17  you're going after, not the whole big release, then actually

18  you commit to SVN, and only what you are changing will go to

19  all the servers via we call a hot fix.

20                It means you don't change much.  You're not

21  supposed to break everything.  And that's a hot fix.  We can

22  do it hot.  We don't have to reinstall everything on our

23  servers.

24                QUESTION:  How does Apple maintain the security of

25  the hot fixes?
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 1               ANSWER:  I'm not sure what you mean by "security,"
 2   sir.
 3               QUESTION:  How do you know that you're not putting
 4   a patch that came from someone else outside of Apple?
 5               ANSWER:  Oh, nobody can access the SVN if you're
 6   not on the Apple VPN or Apple wired network.  And you need
 7   to have your SSH key to access SVN.
 8               QUESTION:  And on the hot fixes, do they have a
 9   digital certificate?
10               ANSWER:  No.  They are not signed.
11               QUESTION:  And are the builds all processed
12   through SSH as well?
13               ANSWER:  I'm sorry.  The build?
14               QUESTION:  How is the build delivered to the
15   machine?
16               ANSWER:  Oh, it's being copied to a filer, which
17   is a product from NetApp.
18               QUESTION:  And how does Apple maintain the
19   security of the build going to the NetApp filer?
20               ANSWER:  Go with the flow, I think.  It's just a
21   simple copy from -- the machine that built and compiled will
22   just make a copy to the filer that is shared through all --
23   all of the machines.  That is how it's done.
24               QUESTION:  And is that within the Apple VPN?
25               ANSWER:  No.  It's -- it is inside the Apple
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 1   secure zone, inside our data center, some trusted machine,

 2   so everything can be clear, because you cannot get in unless

 3   you have the VPN access or an IP known as being safe and you

 4   have your SSH key.  So that's how it's secured.

 5             QUESTION:  We talked a lot today about the Akamai

 6   servers and downloading content, and I just want to clarify

 7   a couple of points, if that's okay with you.

 8             ANSWER:  Okay.

 9             QUESTION:  When a customer purchases a movie or

10   another asset from the iTunes Store, and they are sent a URL

11   to download the movie, is a secure SSL connection used to

12   download that movie?

13             ANSWER:  No.  The download is happening over the

14   HTTP protocol.

15             QUESTION:  Is the HTTP protocol a secure

16   communications protocol?

17             ANSWER:  No.  It's a clear text communication.

18             QUESTION:  When movies or other content are

19   downloaded by iTunes customers from a server, is there any

20   secure connection that is established between the server and

21   the client device while the movie is being downloaded?

22             ANSWER:  No.

23             QUESTION:  Are any digital certificates used to

24   download a movie from -- that's been purchased from iTunes?

25             ANSWER:  No.
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 1                  QUESTION:   Is an SSL connection used to download a

 2   movie that's been purchased from iTunes?

 3                  ANSWER:   No.

 4                  QUESTION:   Are any digital certificates involved

 5   when downloading a movie that's been purchased from iTunes?

 6                  ANSWER:   No.

 7                  QUESTION:   To be clear, is all content that has

 8   been purchased from the iTunes Store downloaded using an

 9   HTTP unsecure connection as opposed to an HTTPS secure

10   connection?

11                  ANSWER:   Yes.

12                  QUESTION:   So all the content purchased from the

13   iTunes Store is downloaded using an unsecure HTTP

14   connection?

15                  ANSWER:   Yes.

16                  QUESTION:   Is every asset that is delivered to an

17   iTunes customer delivered over an unsecure HTTP connection?

18                  ANSWER:   Yes.

19                  (End of deposition.)

20                  MS. ENGELMANN:   Your Honor, that completes the

21   deposition testimony of Mr. Gentil.   Would you like to

22   proceed to the next witness?

23                  THE COURT:   No.   I think at this time, we'll stop

24   for lunch.

25                  You may step down.
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 1              MR. HANSON:  Thank you.

 2              THE COURT:  Ladies and gentlemen, we're going to

 3   recess for lunch at this time.  Leave your notebooks on the

 4   table in the jury room as you go out to lunch.

 5              I remind you again, don't discuss the case among

 6   yourselves or with anyone.  Follow my other instructions.

 7   I'd like to have you back in the jury room as close to 1:00

 8   o'clock as possible so we can proceed.

 9              With those instructions, you're excused for lunch

10   at this time.

11              COURT SECURITY OFFICER:  All rise for the jury.

12              (Jury out.)

13              THE COURT:  All right.  The Court stands in recess

14   for lunch.

15              (Lunch recess.)

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 2                          CERTIFICATION

 3

 4          I HEREBY CERTIFY that the foregoing is a correct

 5   transcript from the stenographic notes of the proceedings in

 6   the above-entitled matter to the best of my ability.

 7

 8

 9   /S/Shelly Holmes                    11/13/15
     SHELLY HOLMES, CSR, TCRR           Date
10   Official Court Reporter
     State of Texas No. 7804
11   Expiration Date:  12/31/16

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